Bulletin de veille

« Focus sur 12 pathologies graves »

Janvier 2012

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Ce bulletin de veille est une publication mensuelle qui recueille les publications scientifiques autour des pathologies suivantes :

- Bronchite chronique obstructive
- Cancer du poumon
- Dengue
- Dépression
- Diabète
- Grippe A
- Maladie d’Alzheimer
- Maladies cardio-vasculaires
- Maladies liées à l'alcool
- Paludisme
- Pathologies liées à l'obésité
- SIDA
- Tuberculose

La recherche documentaire est effectuée dans la base de données Medline et porte sur les 12 titres de revues suivants :

- American journal of epidemiology
- American journal of public health
- BMC public health
- BMJ (Clinical research ed.) - British medical journal
- International journal of epidemiology
- JAMA : the journal of the American Medical Association
- Lancet
- Nature
- Risk analysis : an official publication of the Society for Risk Analysis
- Science
- Social science & medicine
- The New England journal of medicine

Des rapports officiels et institutionnels en ligne sont également signalés en fin de bulletin.
### Articles scientifiques issus de l'interrogation de la base Medline (interrogée le 03/02/2012)

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Bronchite chronique


BACKGROUND AND OBJECTIVE: Patients with COPD, including those with chronic bronchitis (CB), have a high risk of suffering from psychiatric disorders. Although depression has always received greater attention in these patients, most of the published studies have been of poor methodological quality. Anxiety has received less attention than depression among COPD patients. The aim of this study was to assess the prevalence of anxiety and depression among patients with CB and to identify associated factors. METHODS: This was a descriptive, epidemiological population-based study. The study was based on individual data obtained from the 2006 Spanish National Health Survey. Subjects aged 40 years and over were selected for the study. Individuals with CB were identified using a specific questionnaire. Sociodemographic characteristics and health-related variables were analysed. RESULTS: Of the 20,060 subjects selected, 1320 were categorized as having CB (6.5%). The prevalence of anxiety was 15.6% among subjects with CB and 9.4% among those without the disease (P<0.01). Variables that were independently and significantly associated with anxiety among CB patients were female gender, increased age and concomitant comorbidities. The prevalence of depression was 15.9% among subjects with CB and 7.6% among those without the disease (P<0.05). Variables associated with depression among CB patients were female gender, middle age, poorer self-perception of health status, concomitant comorbidities, abstinence and the need for emergency room attendance in the previous year. CONCLUSIONS: Anxiety or depression is around twice as frequent among CB patients as it is among those without CB. Variables associated with anxiety or depression among CB patients included female gender and concomitant comorbidities.

Cancer du poumon


BACKGROUND: Tracheal tumours can be surgically resected but most are an inoperable size at...
the time of diagnosis; therefore, new therapeutic options are needed. We report the clinical transplantation of the tracheobronchial airway with a stem-cell-seeded bioartificial nanocomposite.

METHODS: A 36-year-old male patient, previously treated with debulking surgery and radiation therapy, presented with recurrent primary cancer of the distal trachea and main bronchi. After complete tumour resection, the airway was replaced with a tailored bioartificial nanocomposite previously seeded with autologous bone-marrow mononuclear cells via a bioreactor for 36 h. Postoperative granulocyte colony-stimulating factor filgrastim (10 μg/kg) and epoetin beta (40,000 UI) were given over 14 days. We undertook flow cytometry, scanning electron microscopy, confocal microscopy epigenetics, multiplex, miRNA, and gene expression analyses.

FINDINGS: We noted an extracellular matrix-like coating and proliferating cells including a CD105+ subpopulation in the scaffold after the reseeding and bioreactor process. There were no major complications, and the patient was asymptomatic and tumour free 5 months after transplantation. The bioartificial nanocomposite has patent anastomoses, lined with a vascularised neomucosa, and was partly covered by nearly healthy epithelium. Postoperatively, we detected a mobilisation of peripheral cells displaying increased mesenchymal stromal cell phenotype, and upregulation of epoetin receptors, antiapoptotic genes, and miR-34 and miR-449 biomarkers. These findings, together with increased levels of regenerative-associated plasma factors, strongly suggest stem-cell homing and cell-mediated wound repair, extracellular matrix remodelling, and neovascularisation of the graft. INTERPRETATION: Tailor-made bioartificial scaffolds can be used to replace complex airway defects. The bioreactor reseeding process and pharmacological-induced site-specific and graft-specific regeneration and tissue protection are key factors for successful clinical outcome. FUNDING: European Commission, Knut and Alice Wallenberg Foundation, Swedish Research Council, StratRegen, Vinnova Foundation, Radiumhemmet, Clinigene EU Network of Excellence, Swedish Cancer Society, Centre for Biosciences (The Live Cell imaging Unit), and UCL Business

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Estimates of additive interaction from case-control data are often obtained by logistic regression; such models can also be used to adjust for covariates. This approach to estimating additive interaction has come under some criticism because of possible misspecification of the logistic model: if the underlying model is linear, the logistic model will be misspecified. The authors propose an inverse probability of treatment weighting approach to causal effects and additive interaction in case-control studies. Under the assumption of no unmeasured confounding, the approach amounts to fitting a marginal structural linear odds model. The approach allows for the estimation of measures of additive interaction between dichotomous exposures, such as the relative excess risk due to interaction, using case-control data without having to rely on modeling assumptions for the outcome conditional on the exposures and covariates. Rather than using conditional models for the outcome, models are instead specified for the exposures conditional on the covariates. The approach is illustrated by assessing additive interaction between genetic and environmental factors using data from a case-control study.


Dengue


Diabète

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http://dx.doi.org/10.1016/j.socscimed.2011.05.031

In the past two decades, research on the sociology of diagnosis has attained considerable influence within medical sociology. Analyzing the process and factors that contribute to making a diagnosis amidst uncertainty and contestation, as well as the diagnostic encounter itself, are topics rich for sociological investigation. This paper provides a reformulation of the sociology of diagnosis by proposing the concept of ‘social diagnosis’ which helps us recognize the interplay between larger social structures and individual or community illness manifestations. By outlining a conceptual frame, exploring how social scientists, medical professionals and laypeople contribute to social diagnosis, and providing a case study of how the North American Mohawk Akwesasne reservation dealt with rising obesity prevalence to further illustrate the social diagnosis idea, we embark on developing a cohesive and updated framework for a sociology of diagnosis. This approach is useful not just for sociological research, but has direct implications for the fields of medicine and public health. Approaching diagnosis from this integrated perspective potentially provides a broader context for practitioners and researchers to understand extra-medical factors, which in turn has consequences for patient care and health outcomes.

(3) CASEY D, MURPHY K, LAWTON J, WHITE FF, *et al.* A longitudinal qualitative study examining the factors impacting on the ability of persons with T1DM to assimilate the Dose Adjustment for Normal Eating (DAFNE) principles into daily living and how these factors change over time. BMC Public Health. 2011, vol. 11, p.672
http://dx.doi.org/10.1186/1471-2458-11-672

BACKGROUND: The literature reveals that structured education programmes, such as DAFNE, result in many positive outcomes for people with Type 1 diabetes including a decrease in HbA1c levels and reductions in hypoglycaemia. While there is evidence that some of these outcomes are maintained we do not know at present what factors are most important over time. The study aimed to identify the key factors impacting on persons with Type 1 diabetes ability to assimilate the Dose Adjustment For Normal Eating (DAFNE) DAFNE principles into their daily lives and how these factors change over time. METHODS: This is a longitudinal descriptive qualitative study.
Interviews were undertaken with 40 participants who had attended DAFNE in one of 5 study sites across the Island of Ireland, at 6 weeks, 6 and 12 months after completion of the programme. The interviews lasted from 30 to 60 minutes and were transcribed verbatim. Data were analysed in three ways, a within time analysis, a cross sectional analysis for each participant and a thematic analysis which focused on examining changes over time RESULTS: Four themes that influenced participants' ability to assimilate DAFNE into their daily lives over time were identified. These were: embedded knowledge, continued responsive support, enduring motivation and being empowered. Support at the 6 month period was found to be crucial to continued motivation. CONCLUSIONS: Understanding the factors that influence people's ability to assimilate DAFNE principles over time into their daily lives can help health professionals give focused responsive support that helps people with diabetes become more empowered. Understanding that continued support matters, particularly around 6 months, is important as health professionals can influence good management by providing appropriate support and enhancing motivation. TRIAL REGISTRATION: ISRCTN79759174


BACKGROUND: Determinants of public healthcare expenditures in type 2 diabetics are not well investigated in developing nations and, therefore, it is not clear if higher physical activity decreases healthcare costs. The purpose of this study was to analyze the relationship between physical activity and the expenditures in public healthcare on type 2 diabetes mellitus treatment. METHODS: Cross-sectional study carried out in Brazil. A total of 121 type 2 diabetics attended to in two Basic Healthcare Units were evaluated. Public healthcare expenditures in the last year were estimated using a specific standard table. Also evaluated were: socio-demographic variables; chronological age; exogenous insulin use; smoking habits; fasting glucose test; diabetic neuropathy and anthropometric measures. Habitual physical activity was assessed by questionnaire. RESULTS: Age (r = 0.20; p = 0.023), body mass index (r = 0.33; p = 0.001) and waist-to-hip ratio (r = 0.20; p = 0.025) were positively related to expenditures on medications for the treatment of diseases other than diabetes. Insulin use was associated with increased expenditures. Higher physical activity was associated with lower expenditure, provided medication for treatment of diseases other than diabetes (OR = 0.19; p = 0.007) and medical consultations (OR = 0.26; p = 0.029). CONCLUSIONS: Type 2 diabetics with higher enrollment in physical activity presented consistently lower healthcare expenditures for the public healthcare system.


BACKGROUND: Sub-Saharan Africa (SSA) has a disproportionate burden of both infectious and chronic diseases compared with other world regions. Current disease estimates for SSA are based on sparse data, but projections indicate increases in non-communicable diseases (NCDs) caused by demographic and epidemiologic transitions. We review the literature on NCDs in SSA and summarize data from the World Health Organization and International Agency for Research on Cancer on the prevalence and incidence of cardiovascular diseases, diabetes mellitus Type 2, cancer and their risk factors. METHODS: We searched the PubMed database for studies on each condition, and included those that were community based, conducted in any SSA country and reported on disease or risk factor prevalence, incidence or mortality. RESULTS: We found few community-based studies and some countries (such as South Africa) were over-represented. The prevalence of NCDs and risk factors varied considerably between countries, urban/rural location and other sub-populations. The prevalence of stroke ranged from 0.07 to 0.3%, diabetes mellitus from 0 to 16%, hypertension from 6 to 48%, obesity from 0.4 to 43% and current smoking from 0.4...
BACKGROUND: An impaired glomerular filtration rate (GFR) leads to end-stage renal disease and increases the risks of cardiovascular disease and death. Persons with type 1 diabetes are at high risk for kidney disease, but there are no interventions that have been proved to prevent impairment of the GFR in this population. METHODS: In the Diabetes Control and Complications Trial (DCCT), 1441 persons with type 1 diabetes were randomly assigned to 6.5 years of intensive diabetes therapy aimed at achieving near-normal glucose concentrations or to conventional diabetes therapy aimed at preventing hyperglycemic symptoms. Subsequently, 1375 participants were followed in the observational Epidemiology of Diabetes Interventions and Complications (EDIC) study. Serum creatinine levels were measured annually throughout the course of the two studies. The GFR was estimated with the use of the Chronic Kidney Disease Epidemiology Collaboration formula. We analyzed data from the two studies to determine the long-term effects of intensive diabetes therapy on the risk of impairment of the GFR, which was defined as an incident estimated GFR of less than 60 ml per minute per 1.73 m(2) of body-surface area at two consecutive study visits. RESULTS: Over a median follow-up period of 22 years in the combined studies, impairment of the GFR developed in 24 participants assigned to intensive therapy and in 46 assigned to conventional therapy (risk reduction with intensive therapy, 50%; 95% confidence interval, 18 to 69; P=0.006). Among these participants, end-stage renal disease developed in 8 participants in the intensive-therapy group and in 16 in the conventional-therapy group. As compared with conventional therapy, intensive therapy was associated with a reduction in the mean estimated GFR of 1.7 ml per minute per 1.73 m(2) during the DCCT study but during the EDIC study was associated with a slower rate of reduction in the GFR and an increase in the mean estimated GFR of 2.5 ml per minute per 1.73 m(2) (P<0.001 for both comparisons). The beneficial effect of intensive therapy on the risk of an impaired GFR was fully attenuated after adjustment for glycated hemoglobin levels or albumin excretion rates. CONCLUSIONS: The long-term risk of an impaired GFR was significantly lower among persons treated early in the course of type 1 diabetes with intensive diabetes therapy than among those treated with conventional diabetes therapy. (Fundied by the National Institute of Diabetes and Digestive and Kidney Diseases and others; DCCT/EDIC ClinicalTrials.gov numbers, NCT00360815 and NCT00360893.)

BACKGROUND: As concern about youth obesity continues to mount, there is increasing consideration of widespread policy changes to support improved nutritional and enhanced physical activity offerings in schools. A critical element in the success of such programs may be to involve students as spokespeople for the program. Making such a public commitment to healthy lifestyle program targets (improved nutrition and enhanced physical activity) may potentiate healthy behavior changes among such students and provide a model for their peers. This paper examines whether student's "public commitment"--voluntary participation as a peer communicator or in student-generated media opportunities--in a school-based intervention to prevent diabetes and reduce obesity predicted improved study outcomes including reduced obesity and improved health behaviors. METHODS: Secondary analysis of data from a 3-year randomized controlled trial conducted in 42 middle schools examining the impact of a multi-component school-based...
program on body mass index (BMI) and student health behaviors. A total of 4603 students were assessed at the beginning of sixth grade and the end of eighth grade. Process evaluation data were collected throughout the course of the intervention. All analyses were adjusted for students' baseline values. For this paper, the students in the schools randomized to receive the intervention were further divided into two groups: those who participated in public commitment activities and those who did not. Students from comparable schools randomized to the assessment condition constituted the control group. RESULTS: We found a lower percentage of obesity (greater than or equal to the 95th percentile for BMI) at the end of the study among the group participating in public commitment activities compared to the control group (21.5% vs. 26.6%, p = 0.02). The difference in obesity rates at the end of the study was even greater among the subgroup of students who were overweight or obese at baseline; 44.6% for the "public commitment" group, versus 53.2% for the control group (p = 0.01). There was no difference in obesity rates between the group not participating in public commitment activities and the control group (26.4% vs. 26.6%). CONCLUSIONS: Participating in public commitment activities during the HEALTHY study may have potentiated the changes promoted by the behavioral, nutrition, and physical activity intervention components. TRIAL REGISTRATION: ClinicalTrials.gov number, NCT00458029


BACKGROUND: Non-communicable diseases and their risk factors are leading causes of disease burden in Iran and other middle-income countries. Little evidence exists for whether the primary health-care system can effectively manage non-communicable diseases and risk factors at the population level. Our aim was to examine the effectiveness of the Iranian rural primary health-care system (the Behvarz system) in the management of diabetes and hypertension, and to assess whether the effects depend on the number of health-care workers in the community. METHODS: We used individual-level data from the 2005 Non-Communicable Disease Surveillance Survey (NCDSS) for fasting plasma glucose (FPG) and systolic blood pressure (SBP), body-mass index, medication use, and sociodemographic variables. Data for Behvarz-worker and physician densities were from the 2006 Population and Housing Census and the 2005 Outpatient Care Centre Mapping Survey. We assessed the effectiveness of treatment on FPG and SBP, and associations between FPG or SBP and Behvarz-worker density with two statistical approaches: a mixed-effects regression analysis of the full NCDSS sample adjusting for individual-level and community-level covariates and an analysis that estimated average treatment effect on data balanced with propensity score matching. RESULTS: NCDSS had data for 65,619 individuals aged 25 years or older (11,686 of whom in rural areas); of these, 64,694 (11,521 in rural areas) had data for SBP and 50,202 (9337 in rural areas) had data for FPG. Nationally, 39.2% (95% CI 37.7 to 40.7) of individuals with diabetes and 35.7% (34.9 to 36.5) of those with hypertension received treatment, with higher treatment coverage in women than in men and in urban areas than in rural areas. Treatment lowered mean FPG by an estimated 1.34 mmol/L (0.58 to 2.10) in rural areas and 0.21 mmol/L (-0.15 to 0.56) in urban areas. Individuals in urban areas with hypertension who received treatment had 3.8 mm Hg (3.1 to 4.5) lower SBP than they would have had if they had not received treatment; the treatment effect was 2.5 mm Hg (1.1 to 3.9) lower FPG in rural areas. Each additional Behvarz worker per 1000 adults was associated with a 0.09 mmol/L (0.01 to 0.18) lower district-level average FPG (p=0.02); for SBP this effect was 0.53 mm Hg (-0.44 to 1.50; p=0.28). Our findings were not sensitive to the choice of statistical method. INTERPRETATION: Primary care systems with trained community health-care workers and well established guidelines can be effective in non-communicable disease prevention and management. Iran's primary care system should expand the number and scope of its primary health-care worker programmes to also address blood pressure and to improve performance in areas with few primary care personnel. FUNDING: None
BACKGROUND: Physicians involved in primary prevention are key players in CVD risk control strategies, but the expected reduction in CVD risk that would be obtained if all patients attending primary care had their risk factors controlled according to current guidelines is unknown. The objective of this study was to estimate the excess risk attributable, firstly, to the presence of CVD risk factors and, secondly, to the lack of control of these risk factors in primary prevention care across Europe. METHODS: Cross-sectional study using data from the European Study on Cardiovascular Risk Prevention and Management in Daily Practice (EURIKA), which involved primary care and outpatient clinics involved in primary prevention from 12 European countries between May 2009 and January 2010. We enrolled 7,434 patients over 50 years old with at least one cardiovascular risk factor but without CVD and calculated their 10-year risk of CVD death according to the SCORE equation, modified to take diabetes risk into account. RESULTS: The average 10-year risk of CVD death in study participants (N = 7,434) was 8.2%. Hypertension, hyperlipidemia, smoking, and diabetes were responsible for 32.7% (95% confidence interval 32.0-33.4), 15.1% (14.8-15.4), 10.4% (9.9-11.0), and 16.4% (15.6-17.2) of CVD risk, respectively. The four risk factors accounted for 57.7% (57.0-58.4) of CVD risk, representing a 10-year excess risk of CVD death of 5.66% (5.47-5.85). Lack of control of hypertension, hyperlipidemia, smoking, and diabetes were responsible for 8.8% (8.3-9.3), 10.6% (10.3-10.9), 10.4% (9.9-11.0), and 3.1% (2.8-3.4) of CVD risk, respectively. Lack of control of the four risk factors accounted for 29.2% (28.5-29.8) of CVD risk, representing a 10-year excess risk of CVD death of 3.12% (2.97-3.27).

CONCLUSIONS: Lack of control of CVD risk factors was responsible for almost 30% of the risk of CVD death among patients participating in the EURIKA Study.
weight loss at 3 months, in both Dutch and Turkish Dutch participants. TRIAL REGISTRATION: Netherlands National Trial Register (NTR): NTR2036

http://dx.doi.org/10.1016/S0140-6736(11)61892-8

(17) JESTE DV. Promoting successful ageing through integrated care. BMJ. 2011, vol. 343, p.d6808

http://dx.doi.org/10.2105/AJPH.2011.300252

OBJECTIVES: We examined the relation between low birth weight and childhood family and neighborhood socioeconomic disadvantage and disease onset in adulthood. METHODS: Using US nationally representative longitudinal data, we estimated hazard models of the onset of asthma, hypertension, diabetes, and stroke, heart attack, or heart disease. The sample contained 4387 children who were members of the Panel Study of Income Dynamics in 1968; they were followed up to 2007, when they were aged 39 to 56 years. Our research design included sibling comparisons of disease onset among siblings with different birth weights. RESULTS: The odds ratios of having asthma, hypertension, diabetes, and stroke, heart attack, or heart disease by age 50 years for low birth weight babies vs others were 1.64 (P < .01), 1.51 (P < .01), 2.09 (P < .01), and 2.16 (P < .01), respectively. Adult disease prevalence differed substantially by childhood socioeconomic status (SES). After accounting for childhood socioeconomic factors, we found a substantial hazard ratio of disease onset associated with low birth weight, which persisted for sibling comparisons. CONCLUSIONS: Childhood SES is strongly associated with the onset of chronic disease in adulthood. Low birth weight plays an important role in disease onset; this relation persists after an array of childhood socioeconomic factors is accounted for.

http://dx.doi.org/10.1186/1471-2458-11-707

BACKGROUND: Telephone-based care management programmes have been shown to improve health outcomes in some chronic diseases. Birmingham Own Health is a telephone-based care service (nurse-delivered motivational coaching and support for self-management and lifestyle change) for patients with poorly controlled diabetes, delivered in Birmingham, UK. We used a novel method to evaluate its effectiveness in a real-life setting. METHODS: Retrospective cohort study in the UK. 473 patients aged >/= 18 years with diabetes enrolled onto Birmingham Own Health (intervention cohort) and with > 90 days follow-up, were each matched by age and sex to up to 50 patients with diabetes registered with the General Practice Research Database (GPRD) to create a pool of 21,052 controls (control cohort). Controls were further selected from the main control cohort, matching as close as possible to the cases for baseline test levels, followed by as close as possible length of follow-up (within +/- 30 days limits) and within +/- 90 days baseline test date. The aim was to identify a control group with as similar distribution of prognostic factors to the cases as possible. Effect sizes were computed using linear regression analysis adjusting for age, sex, deprivation quintile, length of follow-up and baseline test levels. RESULTS: After adjusting for baseline values and other potential confounders, the intervention showed significant mean reductions among people with diabetes of 0.3% (95% CI 0.1, 0.4%) in HbA1c; 3.5 mmHg (1.5, 5.5) in systolic blood pressure, 1.6 mmHg (0.4, 2.7) in diastolic blood pressure and 0.7 unit reduction (0.3, 1.0) in BMI, over a mean follow-up of around 10 months. Only small effects were seen on average on serum cholesterol levels (0.1 mmol/l reduction (0.1, 0.2)). More marked effects were seen for each clinical outcome among patients with worse baseline levels.
CONCLUSIONS: Despite the limitations of the study design, the results are consistent with the Birmingham Own Health telephone care management intervention being effective in reducing HbA1c levels, blood pressure and BMI in people with diabetes, to a degree comparable with randomised controlled trials of similar interventions and clinically important. The effects appear to be greater in patients with poorer baseline levels and the intervention is effective in the most deprived populations.


BACKGROUND: No comprehensive assessment of diabetes prevalence in Nauru has been conducted since an extreme prevalence was documented more than two decades ago. This study aims to determine the prevalence and risk factors of diabetes and impaired fasting glucose.

METHODS: A nationwide survey in 2004 of people aged 15-64 years (n = 1592). Fasting plasma glucose levels were used to defined diabetes (>= 7.0 mmol/l or 126 mg/dl) and prediabetes (6.1-6.9 mmol/l or 110-125 mg/dl). RESULTS: The sex-standardized prevalence of diabetes was 13.0% (95% CI: 10.6, 15.4) in men, 14.4% (11.9, 16.9) in women, and 13.7% (12.0, 15.4) combined. The sex-standardized prevalence of prediabetes was 6.4% (4.6, 8.2) for men, 5.5% (3.9, 7.2) for women, and 6.0% (4.8, 7.3) combined. The prevalence of diabetes for individuals 15-24, 25-34, 35-44, 45-54 and 55-64 years was 4.5%, 7.6%, 24.1%, 32.9%, and 42.7%, respectively. The prevalence of prediabetes for the same age categories was 4.2%, 8.8%, 5.9%, 6.6%, 7.1%, respectively. Multivariable, multinomial logit modeling found risk factors for prediabetes were high cholesterol levels (OR: 2.02, 95% CI: 1.66, 2.47) and elevated waist circumference (OR: 1.04, 95% CI: 1.00, 1.08), and for diabetes were age in years (OR: 1.06; 95% CI: 1.04, 1.07), cholesterol levels (OR: 1.84, 95% CI: 1.58, 2.14) and waist circumference (OR: 1.04, 95% CI: 1.02, 1.07). CONCLUSIONS: Diabetes remains a major public health problem in Nauru, affecting one out of every ten people. While the prevalence of diabetes has declined, its burden has persisted among the old but also extended towards the younger age groups.


BACKGROUND: Increasing incidence of diabetes has been reported in many countries and the disease burden related to diabetes to be distributed unevenly across the population. Patients with lower socioeconomic position have been reported to have higher diabetes prevalence, higher rates of diabetes related complications and excess mortality. This study examined trends in gender, age and socioeconomic differences in the burden of diabetes mortality in the Finnish population aged 35-80 and potential years of life lost (PYLL) due to diabetes. METHODS: The data consist of an 11% random sample of Finnish residents in 1987-2007 and an 80% oversample of persons who died during those years. We examined diabetes both as underlying and contributory cause. We calculated age-specific and age-standardized diabetes death rates by gender and socioeconomic position using the direct method and PYLL due to diabetes related deaths for 2004-2007. RESULTS: Diabetes related mortality was higher among older Finns. A clear and systematic socioeconomic pattern was detected among both men and women: the higher the socioeconomic position the lower the mortality. The contribution of diabetes to PYLL was 8% among men and 6% among women. Among women, the contribution of diabetes to PYLL was lower in higher socioeconomic groups, whereas among men, the contribution was similar in all socioeconomic groups. CONCLUSIONS: In order to further reduce the burden of diabetes a
better treatment balance to prevent diabetes complications would significantly decrease the burden of diabetes mortality. Use of underlying and contributory causes of death is useful in monitoring trends and sub-group differences in the burden of diabetes.

(24) MAYOR S. Poor care leads to 24 000 premature deaths from diabetes in England each year. BMJ. 2011, vol. 343, p.d8081


http://www.ncbi.nlm.nih.gov/pubmed/21993818 ou http://dx.doi.org/10.1038/478S10a


(28) NICKLETT EJ. Socioeconomic status and race/ethnicity independently predict health decline among older diabetics. BMC Public Health. 2011, vol. 11, p.684
http://dx.doi.org/10.1186/1471-2458-11-684

BACKGROUND: There are pervasive racial and socioeconomic differences in health status among older adults with type 2 diabetes. The extent to which racial/ethnic and socioeconomic disparities unfold to differential health outcomes has yet to be investigated among older adults with diabetes. This study examines whether or not race/ethnicity and SES are independent predictors of steeper rates of decline in self-rated health among older adults in the U.S. with type 2 diabetes. METHODS: The study population was a subset of diabetic adults aged 65 and older from the Health and Retirement Study. Respondents were followed up to 16 years. Multilevel cumulative logit regression models were used to examine the contributions of socioeconomic indicators, race/ethnicity, and covariates over time. Health decline was measured as a change in self-reported health status over the follow-up period. RESULTS: Relative to whites, blacks had a significantly lower cumulative odds of better health status over time (OR: 0.61, p < .0001). Hispanics reported significantly lower cumulative odds better health over time relative to whites (OR: 0.59, p < .05). Although these disparities narrowed when socioeconomic characteristics were added to the model, significant differences remained. Including socioeconomic status did not remove the health effects of race/ethnicity among blacks and Hispanics. CONCLUSIONS: The author found that race/ethnicity and some socioeconomic indicators were independent predictors of health decline among older adults with diabetes.


OBJECTIVE: To evaluate current risk models and scores for type 2 diabetes and inform selection and implementation of these in practice. DESIGN: Systematic review using standard (quantitative) and realist (mainly qualitative) methodology. Inclusion criteria Papers in any language describing the development or external validation, or both, of models and scores to predict the risk of an adult developing type 2 diabetes. DATA SOURCES: Medline, PreMedline, Embase, and Cochrane databases were searched. Included studies were citation tracked in Google Scholar to identify follow-on studies of usability or impact. DATA EXTRACTION: Data were extracted on statistical properties of models, details of internal or external validation, and use of risk scores beyond the studies that developed them. Quantitative data were tabulated to compare model components and statistical properties. Qualitative data were analysed thematically to identify mechanisms by which use of the risk model or score might improve patient outcomes. RESULTS: 8864 titles were scanned, 115 full text papers considered, and 43 papers included in the final
sample. These described the prospective development or validation, or both, of 145 risk prediction models and scores, 94 of which were studied in detail here. They had been tested on 6.88 million participants followed for up to 28 years. Heterogeneity of primary studies precluded meta-analysis. Some but not all risk models or scores had robust statistical properties (for example, good discrimination and calibration) and had been externally validated on a different population. Genetic markers added nothing to models over clinical and sociodemographic factors. Most authors described their score as "simple" or "easily implemented," although few were specific about the intended users and under what circumstances. Ten mechanisms were identified by which measuring diabetes risk might improve outcomes. Follow-on studies that applied a risk score as part of an intervention aimed at reducing actual risk in people were sparse.

CONCLUSION: Much work has been done to develop diabetes risk models and scores, but most are rarely used because they require tests not routinely available or they were developed without a specific user or clear use in mind. Encouragingly, recent research has begun to tackle usability and the impact of diabetes risk scores. Two promising areas for further research are interventions that prompt lay people to check their own diabetes risk and use of risk scores on population datasets to identify high risk "hotspots" for targeted public health interventions.


Nutritional conditions in early life may causally affect health at older ages. This paper examines the effects of early life exposure to the Dutch famine (Winter 1944-45) on the prevalence of heart diseases, peripheral arterial diseases (PAD) and diabetes mellitus (DM) at ages 60-76. Analyses are performed using data from the fifth cycle of the Longitudinal Aging Study Amsterdam. Exposure to the famine is determined by reported place of residence during the Dutch famine, with those living in the cities in the West of the Netherlands defined as exposed (n = 278) and those living in the rural areas in the West or living in the North or East defined as non-exposed (n = 521). We successively compare the prevalence of heart diseases, PAD and DM at ages 60-76 of 370 males and 429 females exposed and non-exposed to the famine in early life. We distinguish four age classes of exposure in early life: gestation and infancy (ages 0-1), childhood (age 1-5), pre-adolescence (ages 6-10) and adolescence (ages 11-14). The analysis shows that exposure to severe undernutrition at ages 11-14 is significantly associated with a higher probability of developing DM and/or PAD at ages 60-76. The associations are found only in women, but not in men. If suggests that adolescence may be a critical period with respect to exposure to adverse (nutritional) conditions and that research should take this into account. These findings are relevant for children in developing countries who are exposed to severe nutritional deprivation.


OBJECTIVES: We tested the effectiveness of a culturally tailored, behavioral theory-based community health worker intervention for improving glycemic control. METHODS: We used a randomized, 6-month delayed control group design among 164 African American and Latino adult participants recruited from 2 health systems in Detroit, Michigan. Our study was guided by the principles of community-based participatory research. Hemoglobin A1c (HbA1c) level was the
primary outcome measure. Using an empowerment-based approach, community health workers provided participants with diabetes self-management education and regular home visits, and accompanied them to a clinic visit during the 6-month intervention period. RESULTS: Participants in the intervention group had a mean HbA1c value of 8.6% at baseline, which improved to a value of 7.8% at 6 months, for an adjusted change of -0.8 percentage points (P < .01). There was no change in mean HbA1c among the control group (8.5%). Intervention participants also had significantly greater improvements in self-reported diabetes understanding compared with the control group. CONCLUSIONS: This study contributes to the growing evidence for the effectiveness of community health workers and their role in multidisciplinary teams engaged in culturally appropriate health care delivery.


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OBJECTIVE: To evaluate the effectiveness of integrated care for chronic physical diseases and depression in reducing disability and improving quality of life. DESIGN: A randomised controlled trial of multi-condition collaborative care for depression and poorly controlled diabetes and/or risk factors for coronary heart disease compared with usual care among middle aged and elderly people. SETTING: Fourteen primary care clinics in Seattle, Washington. PARTICIPANTS: Patients with diabetes or coronary heart disease, or both, and blood pressure above 140/90 mm Hg, low density lipoprotein concentration >3.37 mmol/L, or glycated haemoglobin 8.5% or higher, and PHQ-9 depression scores of >/= 10. INTERVENTION: A 12 month intervention to improve depression, glycaemic control, blood pressure, and lipid control by integrating a “treat to target” programme for diabetes and risk factors for coronary heart disease with collaborative care for depression. The intervention combined self management support, monitoring of disease control, and pharmacotherapy to control depression, hyperglycaemia, hypertension, and hyperlipidaemia. MAIN OUTCOME MEASURES: Social role disability (Sheehan disability scale), global quality of life rating, and World Health Organization disability assessment schedule (WHODAS-2) scales to measure disabilities in activities of daily living (mobility, self care, household maintenance). RESULTS: Of 214 patients enrolled (106 intervention and 108 usual care), disability and quality of life measures were obtained for 97 intervention patients at six months (92%) and 92 at 12 months (87%), and for 96 usual care patients at six months (89%) and 92 at 12 months (85%). Improvements from baseline on the Sheehan disability scale (-0.9, 95% confidence interval -1.5 to -0.2; P = 0.006) and global quality of life rating (0.7, 0.2 to 1.2; P = 0.005) were significantly greater at six and 12 months in patients in the intervention group. There was a trend toward greater improvement in disabilities in activities of daily living (-1.5, -3.3 to 0.4; P = 0.10). CONCLUSIONS: Integrated care that covers chronic physical disease and comorbid depression can reduce social role disability and enhance global quality of life. Trial registration Clinical Trials NCT00468676

(38) VOS E. Risk of diabetes from statins may be higher in women. BMJ. 2011, vol. 343, p.d7197
BACKGROUND: Understanding people's social lived experiences of chronic illness is fundamental to improving health service delivery and health outcomes, particularly in relation to self-management activity. In explorations of social lived experiences this paper uncovers the ways in which Aboriginal and Torres Strait Islander people with chronic illness experience informal unsolicited support from peers and family members. METHODS: Nineteen Aboriginal and Torres Strait Islander participants were interviewed in the Serious and Continuing Illness Policy and Practice Study (SCIPPS). Participants were people with Type 2 diabetes (N = 17), chronic obstructive pulmonary disease (N = 3) and/or chronic heart failure (N = 11) and family carers (N = 3). Participants were asked to describe their experience of having or caring for someone with chronic illness. Content and thematic analysis of in-depth semi-structured interviews was undertaken, assisted by QSR Nvivo8 software. RESULTS: Participants reported receiving several forms of unsolicited support, including encouragement, practical suggestions for managing, nagging, growling, and surveillance. Additionally, participants had engaged in 'yarning', creating a 'yarn' space, the function of which was distinguished as another important form of unsolicited support. The implications of recognising these various support forms are discussed in relation to responses to unsolicited support as well as the needs of family carers in providing effective informal support. CONCLUSIONS: Certain locations of responsibility are anxiety producing. Family carers must be supported in appropriate education so that they can provide both solicited and unsolicited support in effective ways. Such educational support would have the added benefit of helping to reduce carer anxieties about caring roles and responsibilities. Mainstream health services would benefit from fostering environments that encourage informal interactions that facilitate learning and support in a relaxed atmosphere.


OBJECTIVES: We evaluated associations between mortgage delinquency and changes in health and health-relevant resources over 2 years, with data from the Health and Retirement Study, a longitudinal survey representative of US adults older than 50 years. METHODS: In 2008, participants reported whether they had fallen behind on mortgage payments since 2006 (n = 2474). We used logistic regression to compare changes in health (incidence of elevated depressive symptoms, major declines in self-rated health) and access to health-relevant resources (food, prescription medications) between participants who fell behind on their mortgage.
payments and those who did not. RESULTS: Compared with nondelinquent participants, the mortgage-delinquent group had worse health status and less access to health-relevant resources at baseline. They were also significantly more likely to develop incident depressive symptoms (odds ratio [OR] = 8.60; 95% confidence interval [CI] = 3.38, 21.85), food insecurity (OR = 7.53; 95% CI = 3.01, 18.84), and cost-related medication nonadherence (OR = 8.66; 95% CI = 3.72, 20.16) during follow-up. CONCLUSIONS: Mortgage delinquency was associated with significant elevations in the incidence of mental health impairments and health-relevant material disadvantage. Widespread mortgage default may have important public health implications.


BACKGROUND: Stress is a consequence of different types of external demands, most of which have been shown to be associated with increased risk of ischaemic heart disease (IHD), but whether accumulation of stressors over a life-course results in additional risk of IHD remains unknown. This study investigates the impact of major life events (MLE) in childhood, adulthood and at work, singly and accumulated, on incident IHD in men and women and examines vital exhaustion (VE) and use of tranquillizers as potential mediators. Material and methods The study includes 8738 participants, 57% women, from the third wave of the Copenhagen City Heart Study, who in 1991-93 answered a range of questions on MLE, VE and use of tranquillizers. The participants were followed in a nationwide hospital discharge register until 2007. RESULTS: During follow-up, 653 experienced a first-time incident of IHD. In general, there were no associations between MLE and incidence of IHD. However, being placed in care during childhood was associated with a higher risk of IHD among women [hazard ratio (HR) = 1.36; 95% confidence interval (95% CI) 0.97-1.89], but a lower risk of IHD among men (HR = 0.72; 95% CI 0.51-1.03). MLE showed a dose-response association with psychological risk factors with highest estimates for those exposed to MLE in all three life domains: VE [odds ratio (OR) = 15.07; 95% CI 8.97-25.31] and use of tranquillizers (OR = 4.41; 95% CI 3.10-6.26). CONCLUSION: This prospective study finds no associations between accumulated MLE and IHD. MLE is, however, strongly associated with VE and use of tranquillizers. The results underscore the problems in conceptualizing and measuring MLE.


OBJECTIVES: This within-participants, single time-series study tested a train-the-trainer, promotor-based physical activity (PA) intervention to improve fitness and health indicators. METHODS: Thirty unpaid promotores were trained to promote PA through free exercise classes. Measurements of 337 female community participants at baseline, 6 months, and 12 months assessed changes in health indicators, including systolic and diastolic blood pressure, waist circumference, body mass index (defined as weight in kilograms divided by the square of height in meters), aerobic fitness, and hamstring flexibility, as well as self-reported health indicators (PA, depression) and psychosocial factors (barriers, self-efficacy, and social support—all specific to PA). RESULTS: Mixed effects models showed intervention participation improved systolic blood pressure (P < .001), waist circumference (P < .001), fitness (P < .001), and hamstring flexibility (P < .001). We also noted improvements in use of community resources (P < .05), depressed mood and anhedonia (P < .01), perceived barriers to be physically active (P < .05), and community support for PA (P < .001). Self-efficacy decreased (P < .05), and participation dose (i.e., exposure), as measured by attendance at exercise classes, was not associated with observed changes. CONCLUSIONS: Promotores can promote PA in their community and achieve meaningful changes in the residents’ health.

OBJECTIVES: We used Canadian population-based data to examine changes in the health of caregivers of children with complex health problems compared with caregivers of healthy children over a 10-year time period. METHODS: The National Longitudinal Survey of Children and Youth collected data biennially from 9401 children and their caregivers in 6 waves from 1994-1995 to 2004-2005. We conducted growth-curve analyses of these data to model self-reported general health and depressive symptoms for 4 groups of caregivers: caregivers of healthy children, and caregivers of children with 1, 2, or at least 3 of 4 conceptually distinct indicators of child health problems. We modeled covariates for children (age, gender, only-child status) and caregivers (age, gender, education, income, marital status). RESULTS: After we controlled for covariates, caregiver health outcomes worsened incrementally with increasing complexity of child health problems. Change in self-reported general health and depressive symptoms over the 10-year period was consistent across all groups of caregivers. CONCLUSIONS: Poorer health among caregivers of children with health problems can persist for many years and is associated with complexity of child health problems. Attention to parental health should form a component of health care services for children with health problems.

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This paper uses a cross-country representative sample of Europeans over the age of 50 to analyse whether individuals’ religiosity is associated with higher levels of well-being as a large number of studies by mental health researchers and economists have suggested. It is shown that in simple models which take no account of possible simultaneity that religiosity, as measured by the frequency of prayer, is associated with a higher level of depression. To circumvent possible reverse causality, the paper utilises a quasi-experimental/instrumental variable design which allows one to interpret the findings as causal. This leads to the conclusion that prayer has a positive effect i.e. it leads to a lower level of depressive symptoms.

http://dx.doi.org/10.1001/jama.2011.1840

http://dx.doi.org/10.2105/AJPH.2011.300266

OBJECTIVES: We compared rates of smoking for 2 groups of youths aged 12 to 14 years: those involved in the child welfare system (CW) and their counterparts in the community population. We then investigated factors associated with smoking for each group. METHODS: We drew data from 2 national-level US sources: the National Survey of Child and Adolescent Well-Being and the National Longitudinal Study of Adolescent Health. We estimated logistic regression models for 3 binary outcome measures of smoking behavior: lifetime, current, and regular smoking. RESULTS: CW-involved youths had significantly higher rates of lifetime smoking (43% vs 32%) and current smoking (23% vs 18%) than did youths in the community population. For CW-involved youths, delinquency and smoking were strongly linked. Among youths in the community population, multiple factors, including youth demographics and emotional and behavioral health, affected smoking behavior. CONCLUSIONS: Smoking prevalence was notably higher among CW-involved youths than among the community population. In light of the persistent public health impact of smoking, more attention should be focused on identification of risk factors for prevention and early intervention efforts among the CW-involved population.


BACKGROUND: Lesbian, gay and bisexual (LGB) populations evidence higher rates of psychiatric disorders than heterosexuals, but most LGB individuals do not have mental-health problems. The present study examined risk modifiers at the social/contextual level that may protect LGB individuals from the development of psychiatric disorders. METHODS: Data are drawn from Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions (N = 34,653), a nationally representative study of non-institutionalized US adults. Risk variables included social isolation and economic adversity. High state-level concentration of same-sex couples, obtained from the US Census, was examined as a protective factor. RESULTS: The past-year prevalence of major depression and generalized anxiety disorder was lower among LGB respondents living in states with higher concentrations of same-sex couples, compared with LGB respondents in states with lower concentrations. Additionally, the increased risk for mood and anxiety disorders among LGB individuals exposed to economic adversity and social isolation was evident only in states with low concentrations of same-sex couples. These interactions between the risk and protective factors were not found among heterosexuals, suggesting specificity of the effects to LGB individuals. Results were not attenuated after controlling for socio-demographic factors, state-level income inequality, state-level policies targeting LGBs and state-level attitudes towards LGB-relevant issues. CONCLUSIONS: These results provide evidence for the protective effect of social/contextual influences on the prevalence of psychiatric disorders in LGB individuals. Measures of the social environment should be incorporated into future research on the mental health of LGB populations.

http://dx.doi.org/10.1186/1471-2458-11-656

BACKGROUND: Social and emotional well-being is an important component of overall health. In the Indigenous Australian context, risk indicators of poor social and emotional well-being include social determinants such as poor education, employment, income and housing as well as substance use, racial discrimination and cultural knowledge. This study sought to investigate associations between oral health-related factors and social and emotional well-being in a birth cohort of young Aboriginal adults residing in the northern region of Australia’s Northern Territory. METHODS: Data were collected on five validated domains of social and emotional well-being: anxiety, resilience, depression, suicide and overall mental health. Independent variables included socio-demographics, dental health behaviour, dental disease experience, oral health-related quality of life, substance use, racial discrimination and cultural knowledge. RESULTS: After adjusting for other covariates, poor oral health-related items were associated with each of the social and emotional well-being domains. Specifically, anxiety was associated with being female, having one or more decayed teeth and racial discrimination. Resilience was associated with being male, having a job, owning a toothbrush, having one or more filled teeth and knowing a lot about Indigenous culture; while being female, having experienced dental pain in the past year, use of alcohol, use of marijuana and racial discrimination were associated with depression. Suicide was associated with being female, having experience of untreated dental decay and racial discrimination; while being female, having experience of dental disease in one or more teeth, being dissatisfied about dental appearance and racial discrimination were associated with poor mental health. CONCLUSION: The results suggest there may be value in including oral health-related initiatives when exploring the role of physical conditions on Indigenous social and emotional well-being.

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http://dx.doi.org/10.1016/j.socscimed.2011.07.013

This article analyzes the efficacy of the Together for Empowerment Activities (TEA) intervention in decreasing depressive symptoms and improving social support for persons living with HIV (PLH) and their family members. A total of 79 families, consisting of 88 PLH and 79 family members, were recruited from Anhui province, China, and randomized to the TEA intervention (n = 38) or a control condition (n = 41). The intervention was delivered at three levels: 1) TEA Gathering (small group for PLH and family members); 2) TEA Time (home-based family activities with children that accompany each TEA Gathering); and 3) TEA Garden (community events that build social integration). Face-to-face interviews were administered at baseline, 3, and 6 months. Mixed-effects regression models and kernel density estimation were used for data analysis. PLH and their family members in the intervention reported significant improvements in depressive symptoms, social support, and family functioning at the 3-month and 6-month follow-up assessments compared to those in the control condition. Heterogeneous intervention effects on social support and family functioning were indicated at the 6-month follow-up. The intervention could have various effect patterns for different subgroups within the intervention condition. This study provides preliminary data to support the feasibility and efficacy of a multilevel intervention.

http://dx.doi.org/10.1016/j.socscimed.2011.06.065

This research explores the social factors influencing hospital physicians' initial adoption of duloxetine hydrochloride, with a focus on colleague interactions. The study analyzes archival data compiled by the National Health Insurance Research Database of Taiwan to examine how the prescribing decisions made by psychiatrists' colleagues influence the likelihood of the psychiatrists' initial prescription. The results show that the adoption ratio of a physician's colleagues in a medical center is positively associated with the likelihood of a physician's adoption of the new drug. Specifically, colleague groups with similar and longer tenure as well as similar and older age have significantly positive effects. Colleague groups with the same and different gender also have positive effects. In summary, tenure and age, rather than gender, are vital sources of heterogeneous colleague interactions.

http://dx.doi.org/10.1016/j.socscimed.2011.06.021

This study uses the life course perspective and data from 16 waves of the US National Longitudinal Survey of Youth (1979-1994) to examine whether unfulfilled expectations about educational attainment, employment, marriage, and parenthood are risk factors for subsequent symptoms of depression among young adults in the United States. Results from ordinary least squares regression analyses indicate that achieving a lower level of education than expected, becoming a parent unexpectedly, and being out of the labor force unexpectedly at ages 19-27 predict higher levels of depressive symptoms at ages 29-37, adjusting for demographics, family background, and earlier mental health. These effects do not significantly vary by gender, age, race/ethnicity, or family background, and are not explained by being selected out of the labor force.
for long durations because of mental or physical illness, attending school, keeping house, or other reasons. Overall, this study contributes to the literature on stress and mental health by acknowledging people's expectations about the markers of adulthood, and advances our understanding of why the timing of transitions in people's lives can have long-term mental health consequences.


http://dx.doi.org/10.1016/j.socscimed.2011.06.034

Depression, a disorder often thought of as a women's health issue, is underreported in men, and little is known about how heterosexual couples respond when the male partner is depressed. Within the context of men's depression, couples may be challenged to make life adjustments that impact their gender relations. The findings detailed in this article are drawn from an innovative qualitative study of 26 Canadian heterosexual couples (26 men and their 26 women partners) in which the man had a formal diagnosis and/or self-identified as depressed. Participants completed individual, semi structured interviews that focused on exploring how masculinities and femininities intersect to forge particular heterosexual gender relations in the context of men's depression. A social constructionist gender analysis revealed three couple patterns: trading places, business as usual, and edgy tensions. Trading places refers to couples who embodied some atypical masculine and feminine roles to compensate for the men's depression-induced losses (e.g., men as homemakers and women as breadwinners). Women partners in these dyads broke with feminine ideals in how they provided partner support by employing tough love strategies for self-protection and a means of prompting the men's self-management of their depression. Couples involved in business as usual co-constructed men's alignment with masculine workman ideals and women's support of their partner to counter and conceal men's depression induced-deficits. Also described were edgy tensions, where a mismatch of gender expectations fueled resentment and dysfunction that threatened the viability of some relationships. Overall, the limits of women's resilience and care-giving were evident, yet the findings also reveal how men's management of their depression was directly influenced by their partner. Opportunities for couples to assess their relationship dynamics within a broad range of gender relations might support couples' connectedness and life quality amid the challenges that accompany men's depression.

http://dx.doi.org/10.1016/j.socscimed.2011.07.002

Nearly one out of every four children in the US is a child of immigrants. Yet few studies have assessed how factors at various stages of migration contribute to the development of health problems in immigrant populations. Most focus only on post-migration factors influencing health. Using data from the Latino Adolescent Migration, Health, and Adaptation Project, this study assessed the extent to which pre-migration (e.g., major life events, high poverty), migration (e.g., unsafe and stressful migration experiences), post-migration (e.g., discrimination, neighborhood factors, family reunification, linguistic isolation), and social support factors contributed to depressive symptoms among a sample of Latino immigrant parents with children ages 12-18. Results indicated that high poverty levels prior to migration, stressful experiences during migration, as well as racial problems in the neighborhood and racial/ethnic discrimination upon settlement in the US most strongly contribute to the development of depressive symptoms among Latino immigrant parents. Family reunification, social support, and familism reduce the likelihood of depressive symptoms.
BACKGROUND: Results concerning the association between Body Mass Index (BMI) and depression in adolescence are conflicting, some describing a linear association (increase in BMI with level of depression), some a U-shaped association (both underweight and obesity are associated with high levels of depression), and they mostly concern small samples. The purpose of this study was to describe the association between BMI and depression in a large representative sample of French adolescents. METHODS: The association between BMI and depression, measured on the Adolescent Depression Rating Scale (ADRS), was tested in a French national representative sample of 39542 adolescents aged 17. Self-report data is derived from the 2008 ESCAPAD study, an epidemiological study based on a questionnaire focused on health and drug consumption. We used spline function analysis to describe the association between BMI and depression. RESULTS: The association between BMI and depression is significant (p < 0.001) and non-linear for both genders, with no effect of parental working and marital status. For boys, there is U-shaped association. For girls the shape of the association is complex and shows inverted convexity for high levels of BMI. The spline shows higher scores for depression among overweight girls than among obese girls. CONCLUSION: There is evidence for a gender difference in the association between BMI and depression in adolescents, supporting the need to study boys and girls separately. Overweight adolescent girls are more likely to be depressed than obese adolescent girls, giving support for "fat and jolly" hypothesis not only among older women but also among adolescent girls.

OBJECTIVE: To evaluate the effectiveness of integrated care for chronic physical diseases and depression in reducing disability and improving quality of life. DESIGN: A randomised controlled trial of multi-condition collaborative care for depression and poorly controlled diabetes and/or risk factors for coronary heart disease compared with usual care among middle aged and elderly people SETTING: Fourteen primary care clinics in Seattle, Washington. PARTICIPANTS: Patients with diabetes or coronary heart disease, or both, and blood pressure above 140/90 mm Hg, low density lipoprotein concentration >3.37 mmol/L, or glycated haemoglobin 8.5% or higher, and PHQ-9 depression scores of >/= 10. INTERVENTION: A 12 month intervention to improve depression, glycaemic control, blood pressure, and lipid control by integrating a "treat to target" programme for diabetes and risk factors for coronary heart disease with collaborative care for depression. The intervention combined self management support, monitoring of disease control, and pharmacotherapy to control depression, hyperglycaemia, hypertension, and hyperlipidaemia. MAIN OUTCOME MEASURES: Social role disability (Sheehan disability scale), global quality of life rating, and World Health Organization disability assessment schedule (WHODAS-2) scales to measure disabilities in activities of daily living (mobility, self care, household maintenance). RESULTS: Of 214 patients enrolled (106 intervention and 108 usual care), disability and quality of life measures were obtained for 97 intervention patients at six months (92%) and 92 at 12 months (87%), and for 96 usual care patients at six months (89%) and 92 at 12 months (85%). Improvements from baseline on the Sheehan disability scale (-0.9, 95% confidence interval -1.5 to -0.2; P = 0.006) and global quality of life rating (0.7, 0.2 to 1.2; P = 0.005) were significantly greater at six and 12 months in patients in the intervention group. There was a trend toward greater improvement in disabilities in activities of daily living (-1.5, -3.3 to 0.4; P = 0.10). CONCLUSIONS: Integrated care that covers chronic physical disease and comorbid depression can reduce social role disability and enhance global quality of life. Trial registration Clinical Trials NCT00468676


Grippe A


Discoveries made during the 1918 influenza A pandemic and reports of severe disease associated with coinfection during the 2009 hemagglutinin type 1 and neuraminidase type 1 (commonly known as H1N1 or swine flu) pandemic have renewed interest in the role of coinfection in disease pathogenesis. The authors assessed how various timings of coinfection with influenza virus and pneumonia-causing bacteria could affect the severity of illness at multiple levels of interaction, including the biologic and population levels. Animal studies most strongly support a single pathway of coinfection with influenza inoculation occurring approximately 7 days before inoculation with Streptococcus pneumonieae, but less-examined pathways of infection also may be important for human disease. The authors discussed the implications of each pathway for disease prevention and what they would expect to see at the population level if there were sufficient data available. Lastly, the authors identified crucial gaps in the study of timing of coinfection and proposed related research questions

OBJECTIVE: To determine the effectiveness of an adjuvanted monovalent vaccine against pandemic influenza A/H1N1 among people with underlying chronic diseases. DESIGN: Historical cohort study. SETTING: Mandatory national reporting systems, 2 November 2009 to 31 January 2010, Denmark. PARTICIPANTS: 388 069 people under 65 years of age with a diagnosis in the past five years of at least one underlying disease expected to increase the risk of severe illness after influenza. MAIN OUTCOME MEASURES: Laboratory confirmed H1N1 infection and influenza related hospital admission with laboratory confirmed H1N1 infection. Estimates of vaccine effectiveness were adjusted for age and underlying disease. RESULTS: The effectiveness of pandemic vaccine against confirmed H1N1 infection 14 days after one dose of vaccine was 49% (95% confidence interval 10% to 71%). The effectiveness of vaccine against admission to hospital for confirmed H1N1 infection was 44% (-19% to 73%). CONCLUSIONS: The adjuvanted monovalent vaccine against pandemic influenza A/H1N1 was offered late in the 2009-10 influenza season. Among chronically ill people, this vaccine offered protection against laboratory confirmed H1N1 infection but only offered non-significant protection against influenza related hospital admissions confirmed as H1N1 infection. This finding is of public health relevance because the population of chronically ill people is a major target group for pandemic vaccinations and because of the delayed availability of pandemic vaccines in a forthcoming pandemic.


http://dx.doi.org/10.1186/1471-2458-12-82

ABSTRACT: BACKGROUND: The large-scale deployment of antiviral drugs from the Strategic National Stockpile during the 2009 H1N1 influenza response provides a unique opportunity to study local public health implementation of the medical countermeasure dispensing capability in a prolonged event of national significance. This study aims to describe the range of methods used by local health departments (LHDS) in California to manage antiviral activities and to gain a better understanding of the related challenges experienced by health departments and their community partners. METHODS: This research employed a mixed-methods approach. First, a multi-disciplinary focus group of pandemic influenza planners from key stakeholder groups in California was convened in order to generate ideas and identify critical themes related to the local implementation of antiviral activities during the H1N1 influenza response. These qualitative data informed the development of a web-based survey, which was distributed to all 61 LHDS in California for the purpose of assessing the experiences of a representative sample of local health agencies in a large region. RESULTS: Forty-four LHDS participated in this study, representing 72% of the local public health agencies in California. While most communities dispensed a modest number of publicly purchased antivirals, LHDS nevertheless drew on their previous work and engaged in a number of antiviral activities, including: acquiring, allocating, distributing, dispensing, tracking, developing guidance, and communicating to the public and clinical community. LHDS also identified specific antiviral challenges presented by the H1N1 pandemic, including: reconciling multiple sources and versions of antiviral guidance, determining appropriate uses and recipients of publicly purchased antivirals, and staffing shortages. CONCLUSIONS: The 2009 H1N1 influenza pandemic presented an unusual opportunity to learn about the role of local public health in the management of antiviral response activities during a real public health emergency. Results of this study offer an important descriptive account of LHD management of publicly purchased antivirals, and provide practitioners, policy makers, and academics with a practice-based assessment of these events. The issues raised and the challenges faced by LHDS
should be leveraged to inform public health planning for future pandemics and other emergency events that require medical countermeasure dispensing activities.


Despite considerable research efforts in specific subpopulations, reliable estimates of the infection attack rates and severity of 2009 influenza A (H1N1) in the general population remain scarce. Such estimates are essential to the tailoring of future control strategies. Therefore, 2 serial population-based serologic surveys were conducted, before and after the 2009 influenza A (H1N1) epidemic, in the Netherlands. Random age-stratified samples were obtained using a 2-stage cluster design. Participants donated blood and completed a questionnaire. Data on sentinel general practitioner-attended influenza-like illness and nationwide hospitalization and mortality were used to assess the severity of infection. The estimated infection attack rates were low in the general population (7.6%, 95% confidence interval: 3.6, 11) but high in children aged 5-19 years (35%, 95% confidence interval: 25, 45). The estimated hospitalization and mortality rates per infection increased significantly with age (5-19 years: 0.042% and 0.00094%, respectively; 20-39 years: 0.12% and 0.0025%; 40-59 years: 0.68% and 0.032%; 60-75 years: >0.81% and >0.06%). The high infection attack rate in children and the very low attack rate in older adults, together with the low severity of illness per infection in children but substantial severity in older adults, produced an epidemic with a low overall impact.


Clin Microbiol Infect ABSTRACT: The swine-origin H1N1 influenza A virus (pH1N1(2009)) started to circulate worldwide in 2009, and cases were notified in a number of sub-Saharan African countries. However, no epidemiological data allowing estimation of the epidemic burden were available in this region, preventing comprehensive comparisons with other parts of the world. The CoPanFlu-Mali programme studied a cohort of 202 individuals living in the rural commune of Dioro (southern central Mali). Pre-pandemic and post-pandemic paired sera (sampled in 2006 and April 2010, respectively) were tested by the haemagglutination inhibition (HI) method. Different estimates of pH1N1(2009) infection during the 2009 first epidemic wave were used (increased prevalence of HI titre of >/=1/40 or >/=1/80, seroconversions) and provided convergent attack rate values (12.4-14.9%), the highest values being observed in the 0-19-year age group (16.0-18.4%). In all age groups, pre-pandemic HI titres of >/=1/40 were associated with complete absence of seroconversion; and geometric mean titres were <15 in individuals who seroconverted and >20 in others. Important variations in seroconversion rate existed among the different villages investigated. Despite limitations resulting from the size and composition of the sample analysed, this study provides strong evidence that the impact of the pH1N1(2009) first wave was more important than previously believed, and that the determinants of the epidemic spread in sub-Saharan populations were quite different from those observed in developed countries.
Maladies d'Alzheimer


http://dx.doi.org/10.1056/NEJMc1113592


(6) SHELDON T. Dementia patient's euthanasia was lawful, say Dutch authorities. BMJ. 2011, vol. 343, p.d7510


Abeta (beta-amyloid peptide) is an important contributor to Alzheimer's disease (AD). We modeled Abeta toxicity in yeast by directing the peptide to the secretory pathway. A genome-wide screen for toxicity modifiers identified the yeast homolog of phosphatidylinositol binding clathrin assembly protein (PICALM) and other endocytic factors connected to AD whose relationship to Abeta was previously unknown. The factors identified in yeast modified Abeta toxicity in glutamatergic neurons of Caenorhabditis elegans and in primary rat cortical neurons. In yeast, Abeta impaired the endocytic trafficking of a plasma membrane receptor, which was ameliorated by endocytic pathway factors identified in the yeast screen. Thus, links between Abeta, endocytosis, and human AD risk factors can be ascertained with yeast as a model system.

Maladies cardio-vasculaires

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CONTEXT: Thienopyridines are among the most widely prescribed medications, but their use can be complicated by the unanticipated need for surgery. Despite increased risk of thrombosis, guidelines recommend discontinuing thienopyridines 5 to 7 days prior to surgery to minimize
bleeding. OBJECTIVE: To evaluate the use of cangrelor, an intravenous, reversible P2Y(12) platelet inhibitor for bridging thienopyridine-treated patients to coronary artery bypass grafting (CABG) surgery. DESIGN, SETTING, AND PATIENTS: Prospective, randomized, double-blind, placebo-controlled, multicenter trial, involving 210 patients with an acute coronary syndrome (ACS) or treated with a coronary stent and receiving a thienopyridine awaiting CABG surgery to receive either cangrelor or placebo after an initial open-label, dose-finding phase (n = 11) conducted between January 2009 and April 2011. Interventions Thienopyridines were stopped and patients were administered cangrelor or placebo for at least 48 hours, which was discontinued 1 to 6 hours before CABG surgery. MAIN OUTCOME MEASURES: The primary efficacy end point was platelet reactivity (measured in P2Y(12) reaction units [PRUs]), assessed daily. The main safety end point was excessive CABG surgery-related bleeding. RESULTS: The dose of cangrelor determined in 10 patients in the open-label stage was 0.75 mg/kg per minute. In the randomized phase, a greater proportion of patients treated with cangrelor had low levels of platelet reactivity throughout the entire treatment period compared with placebo (primary end point, PRU <240; 98.8% (83 of 84) vs 19.0% (16 of 84); relative risk [RR], 5.2 [95% CI, 3.3-8.1] P < .001). Excessive CABG surgery-related bleeding occurred in 11.8% (12 of 102) vs 10.4% (10 of 96) in the cangrelor and placebo groups, respectively (RR, 1.1 [95% CI, 0.5-2.5] P = .763). There were no significant differences in major bleeding prior to CABG surgery, although minor bleeding episodes were numerically higher with cangrelor. CONCLUSIONS: Among patients who discontinue thienopyridine therapy prior to cardiac surgery, the use of cangrelor compared with placebo resulted in a higher rate of maintenance of platelet inhibition. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT00767507


BACKGROUND: In patients with established cardiovascular disease, residual cardiovascular risk persists despite the achievement of target low-density lipoprotein (LDL) cholesterol levels with statin therapy. It is unclear whether extended-release niacin added to simvastatin to raise low levels of high-density lipoprotein (HDL) cholesterol is superior to simvastatin alone in reducing such residual risk. METHODS: We randomly assigned eligible patients to receive extended-release niacin, 1500 to 2000 mg per day, or matching placebo. All patients received simvastatin, 40 to 80 mg per day, plus ezetimibe, 10 mg per day, if needed, to maintain an LDL cholesterol level of 40 to 80 mg per deciliter (1.03 to 2.07 mmol per liter). The primary end point was the first event of the composite of death from coronary heart disease, nonfatal myocardial infarction, ischemic stroke, hospitalization for an acute coronary syndrome, or symptom-driven coronary or cerebral revascularization. RESULTS: A total of 3414 patients were randomly assigned to receive niacin (1718) or placebo (1696). The trial was stopped after a mean follow-up period of 3 years owing to a lack of efficacy. At 2 years, niacin therapy had significantly increased the median HDL cholesterol level from 35 mg per deciliter (0.91 mmol per liter) to 42 mg per deciliter (1.08 mmol per liter), lowered the triglyceride level from 164 mg per deciliter (1.85 mmol per liter) to 122 mg per deciliter (1.38 mmol per liter), and lowered the LDL cholesterol level from 74 mg per deciliter (1.91 mmol per liter) to 62 mg per deciliter (1.60 mmol per liter). The primary end point occurred in 282 patients in the niacin group (16.4%) and in 274 patients in the placebo group (16.2%) (hazard ratio, 1.02; 95% confidence interval, 0.87 to 1.21; P=0.79 by the log-rank test). CONCLUSIONS: Among patients with atherosclerotic cardiovascular disease and LDL cholesterol levels of less than 70 mg per deciliter (1.81 mmol per liter), there was no incremental clinical benefit from the addition of niacin to statin therapy during a 36-month follow-up period, despite significant improvements in HDL cholesterol and triglyceride levels. (Fund-ed by the National Heart, Lung, and Blood Institute and Abbott Laboratories; AIM-HIGH ClinicalTrials.gov number, NCT00120289.)

BACKGROUND: Findings of large randomised trials have shown that lowering LDL cholesterol with statins reduces vascular morbidity and mortality rapidly, but limited evidence exists about the long-term efficacy and safety of statin treatment. The aim of the extended follow-up of the Heart Protection Study (HPS) is to assess long-term efficacy and safety of lowering LDL cholesterol with statins, and here we report cause-specific mortality and major morbidity in the in-trial and post-trial periods. METHODS: 20,536 patients at high risk of vascular and non-vascular outcomes were allocated either 40 mg simvastatin daily or placebo, using minimised randomisation. Mean in-trial follow-up was 5.3 years (SD 1.2), and post-trial follow-up of surviving patients yielded a mean total duration of 11.0 years (SD 0.6). The primary outcome of the long-term follow-up of HPS was first post-randomisation major vascular event, and analysis was by intention to treat. This trial is registered with ISRCTN, number 48493393. FINDINGS: During the in-trial period, allocation to simvastatin yielded an average reduction in LDL cholesterol of 1.0 mmol/L and a proportional decrease in major vascular events of 23% (95% CI 19-28; p<0.0001), with significant divergence each year after the first. During the post-trial period (when statin use and lipid concentrations were similar in both groups), no further significant reductions were noted in either major vascular events (risk ratio [RR] 0.95 [0.89-1.02]) or vascular mortality (0.98 [0.90-1.07]). During the combined in-trial and post-trial periods, no significant differences were recorded in cancer incidence at all sites (0.98 [0.92-1.05]) or any particular site, or in mortality attributed to cancer (1.01 [0.92-1.11]) or to non-vascular causes (0.96 [0.89-1.03]). INTERPRETATION: More prolonged LDL-lowering statin treatment produces larger absolute reductions in vascular events. Moreover, even after study treatment stopped in HPS, benefits persisted for at least 5 years without any evidence of emerging hazards. These findings provide further support for the prompt initiation and long-term continuation of statin treatment. FUNDING: UK Medical Research Council, British Heart Foundation, Merck & Co, Roche Vitamins


BACKGROUND: Dronedarone restores sinus rhythm and reduces hospitalization or death in intermittent atrial fibrillation. It also lowers heart rate and blood pressure and has antiadrenergic and potential ventricular antiarrhythmic effects. We hypothesized that dronedarone would reduce major vascular events in high-risk permanent atrial fibrillation. METHODS: We assigned patients who were at least 65 years of age with at least a 6-month history of permanent atrial fibrillation and risk factors for major vascular events to receive dronedarone or placebo. The first coprimary outcome was stroke, myocardial infarction, systemic embolism, or death from cardiovascular causes. The second coprimary outcome was unplanned hospitalization for a cardiovascular cause or death. RESULTS: After the enrollment of 3236 patients, the study was stopped for safety reasons. The first coprimary outcome occurred in 43 patients receiving dronedarone and 19 receiving placebo (hazard ratio, 2.29; 95% confidence interval [CI], 1.34 to 3.94; P=0.002). There were 21 deaths from cardiovascular causes in the dronedarone group and 10 in the placebo group (hazard ratio, 2.11; 95% CI, 1.00 to 4.49; P=0.046), including death from arrhythmia in 13 patients and 4 patients, respectively (hazard ratio, 3.26; 95% CI, 1.06 to 10.00; P=0.03). Stroke occurred in 23 patients in the dronedarone group and 10 in the placebo group (hazard ratio, 2.32; 95% CI, 1.11 to 4.88; P=0.02). Hospitalization for heart failure occurred in 43 patients in the dronedarone group and 24 in the placebo group (hazard ratio, 1.81; 95% CI, 1.10 to 2.99; P=0.02). CONCLUSIONS: Dronedarone increased rates of heart failure, stroke, and death from cardiovascular causes in patients with permanent atrial fibrillation who were at risk for major vascular events. Our data show that this drug should not be used in such patients. (Funded by Sanofi-Aventis; PALLAS ClinicalTrials.gov number, NCT01151137.)
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CONTEXT: More than 1.5 million US adults use stimulants and other medications labeled for treatment of attention-deficit/hyperactivity disorder (ADHD). These agents can increase heart rate and blood pressure, raising concerns about their cardiovascular safety. OBJECTIVE: To examine whether current use of medications prescribed primarily to treat ADHD is associated with increased risk of serious cardiovascular events in young and middle-aged adults. DESIGN, SETTING, AND PARTICIPANTS: Retrospective, population-based cohort study using electronic health care records from 4 study sites (OptumInsight Epidemiology, Tennessee Medicaid, Kaiser Permanente California, and the HMO Research Network), starting in 1986 at 1 site and ending in 2005 at all sites, with additional covariate assessment using 2007 survey data. Participants were adults aged 25 through 64 years with dispensed prescriptions for methylphenidate, amphetamine, or atomoxetine at baseline. Each medication user (n = 150,359) was matched to 2 nonusers on study site, birth year, sex, and calendar year (443,198 total users and nonusers). MAIN OUTCOME MEASURES: Serious cardiovascular events, including myocardial infarction (MI), sudden cardiac death (SCD), or stroke, with comparison between current or new users and remote users to account for potential healthy-user bias. RESULTS: During 806,182 person-years of follow-up (median, 1.3 years per person), 1357 cases of MI, 296 cases of SCD, and 575 cases of stroke occurred. There were 107,322 person-years of current use (median, 0.33 years), with a crude incidence per 1000 person-years of 1.34 (95% CI, 1.14-1.57) for MI, 0.30 (95% CI, 0.20-0.42) for SCD, and 0.56 (95% CI, 0.43-0.72) for stroke. The multivariable-adjusted rate ratio (RR) of serious cardiovascular events for current use vs nonuse of ADHD medications was 0.83 (95% CI, 0.72-0.96). Among new users of ADHD medications, the adjusted RR was 0.77 (95% CI, 0.63-0.94). The adjusted RR for current use vs remote use was 1.03 (95% CI, 0.86-1.24); for new use vs remote use, the adjusted RR was 1.02 (95% CI, 0.82-1.28); the upper limit of 1.28 corresponds to an additional 0.19 events per 1000 person-years at ages 25-44 years and 0.77 events per 1000 person-years at ages 45-64 years. CONCLUSIONS: Among young and middle-aged adults, current or new use of ADHD medications, compared with nonuse or remote use, was not associated with an increased risk of serious cardiovascular events. Apparent protective associations likely represent healthy-user bias.


BACKGROUND: One quarter of strokes are of unknown cause, and subclinical atrial fibrillation may be a common etiologic factor. Pacemakers can detect subclinical episodes of rapid atrial rate, which correlate with electrocardiographically documented atrial fibrillation. We evaluated whether subclinical episodes of rapid atrial rate detected by implanted devices were associated with an increased risk of ischemic stroke in patients who did not have other evidence of atrial fibrillation. METHODS: We enrolled 2580 patients, 65 years of age or older, with hypertension and no history of atrial fibrillation, in whom a pacemaker or defibrillator had recently been implanted. We monitored the patients for 3 months to detect subclinical atrial tachyarrhythmias (episodes of atrial rate >190 beats per minute for more than 6 minutes) and followed them for a mean of 2.5
years for the primary outcome of ischemic stroke or systemic embolism. Patients with pacemakers were randomly assigned to receive or not to receive continuous atrial overdrive pacing.

RESULTS: By 3 months, subclinical atrial tachyarrhythmias detected by implanted devices had occurred in 261 patients (10.1%). Subclinical atrial tachyarrhythmias were associated with an increased risk of clinical atrial fibrillation (hazard ratio, 5.56; 95% confidence interval [CI], 3.78 to 8.17; P<0.001) and of ischemic stroke or systemic embolism (hazard ratio, 2.49; 95% CI, 1.28 to 4.85; P=0.007). Of 51 patients who had a primary outcome event, 11 had had subclinical atrial tachyarrhythmias detected by 3 months, and none had had clinical atrial fibrillation by 3 months. The population attributable risk of stroke or systemic embolism associated with subclinical atrial tachyarrhythmias was 13%. Subclinical atrial tachyarrhythmias remained predictive of the primary outcome after adjustment for predictors of stroke (hazard ratio, 2.50; 95% CI, 1.28 to 4.89; P=0.008). Continuous atrial overdrive pacing did not prevent atrial fibrillation. CONCLUSIONS: Subclinical atrial tachyarrhythmias, without clinical atrial fibrillation, occurred frequently in patients with pacemakers and were associated with a significantly increased risk of ischemic stroke or systemic embolism. (Funded by St. Jude Medical; ASSERT ClinicalTrials.gov number, NCT00256152.)


BACKGROUND: Acute coronary syndromes arise from coronary atherosclerosis with superimposed thrombosis. Since factor Xa plays a central role in thrombosis, the inhibition of factor Xa with low-dose rivaroxaban might improve cardiovascular outcomes in patients with a recent acute coronary syndrome. METHODS: In this double-blind, placebo-controlled trial, we randomly assigned 15,526 patients with a recent acute coronary syndrome to receive twice-daily doses of either 2.5 mg or 5 mg of rivaroxaban or placebo for a mean of 13 months and up to 31 months. The primary efficacy end point was a composite of death from cardiovascular causes, myocardial infarction, or stroke. RESULTS: Rivaroxaban significantly reduced the primary efficacy end point, as compared with placebo, with respective rates of 8.9% and 10.7% (hazard ratio in the rivaroxaban group, 0.84; 95% confidence interval [CI], 0.74 to 0.96; P=0.008), with significant improvement for both the twice-daily 2.5-mg dose (9.1% vs. 10.7%, P=0.02) and the twice-daily 5-mg dose (8.8% vs. 10.7%, P=0.03). The twice-daily 2.5-mg dose of rivaroxaban reduced the rates of death from cardiovascular causes (2.7% vs. 4.1%, P=0.002) and from any cause (2.9% vs. 4.5%, P=0.002), a survival benefit that was not seen with the twice-daily 5-mg dose. As compared with placebo, rivaroxaban increased the rates of major bleeding not related to coronary-artery bypass grafting (2.1% vs. 0.6%, P<0.001) and intracranial hemorrhage (0.6% vs. 0.2%, P=0.009), without a significant increase in fatal bleeding (0.3% vs. 0.2%, P=0.66) or other adverse events. The twice-daily 2.5-mg dose resulted in fewer fatal bleeding events than the twice-daily 5-mg dose (0.1% vs. 0.4%, P=0.04). CONCLUSIONS: In patients with a recent acute coronary syndrome, rivaroxaban reduced the risk of the composite end point of death from cardiovascular causes, myocardial infarction, or stroke. Rivaroxaban increased the risk of major bleeding and intracranial hemorrhage but not the risk of fatal bleeding. (Funded by Johnson & Johnson and Bayer Healthcare; ATLAS ACS 2-TIMI 51 ClinicalTrials.gov number, NCT00809965.)

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http://dx.doi.org/10.1056/NEJMc1112500#SA2


CONTEXT: Obesity is a risk factor for cardiovascular events. Weight loss might protect against cardiovascular events, but solid evidence is lacking. OBJECTIVE: To study the association between bariatric surgery, weight loss, and cardiovascular events. DESIGN, SETTING, AND PARTICIPANTS: The Swedish Obese Subjects (SOS) study is an ongoing, nonrandomized, prospective, controlled study conducted at 25 public surgical departments and 480 primary health care centers in Sweden of 2010 obese participants who underwent bariatric surgery and 2037 contemporaneously matched obese controls who received usual care. Patients were recruited between September 1, 1987, and January 31, 2001. Date of analysis was December 31, 2009, with median follow-up of 14.7 years (range, 0-20 years). Inclusion criteria were age 37 to 60 years and a body mass index of at least 34 in men and at least 38 in women. Exclusion criteria were identical in surgery and control patients. Surgery patients underwent gastric bypass (13.2%), banding (18.7%), or vertical banded gastropasty (68.1%), and controls received usual care in the Swedish primary health care system. Physical and biochemical examinations and database cross-checks were undertaken at preplanned intervals. MAIN OUTCOME MEASURES: The primary end point of the SOS study (total mortality) was published in 2007. Myocardial infarction and stroke were predefined secondary end points, considered separately and combined. RESULTS: Bariatric surgery was associated with a reduced number of cardiovascular deaths (28 events among 2010 patients in the surgery group vs 49 events among 2037 patients in the control group; adjusted hazard ratio [HR], 0.47; 95% CI, 0.29-0.76; P = .002). The number of total first time (fatal or nonfatal) cardiovascular events (myocardial infarction or stroke, whichever came first) was lower in the surgery group (199 events among 2010 patients) than in the control group (234 events among 2037 patients; adjusted HR, 0.67; 95% CI, 0.54-0.83; P < .001). CONCLUSION: Compared with usual care, bariatric surgery was associated with reduced number of cardiovascular deaths and lower incidence of cardiovascular events in obese adults.

(22) SPENCE JD, STAMPFER MJ. Understanding the complexity of homocysteine lowering with vitamins: the potential role of subgroup analyses. JAMA. 2011 Dec. 21, vol. 306, n° 23, pp.2610-2611  
http://dx.doi.org/10.1001/jama.2011.1834

BACKGROUND: Vorapaxar is a new oral protease-activated-receptor 1 (PAR-1) antagonist that inhibits thrombin-induced platelet activation. METHODS: In this multinational, double-blind, randomized trial, we compared vorapaxar with placebo in 12,944 patients who had acute coronary syndromes without ST-segment elevation. The primary end point was a composite of death from cardiovascular causes, myocardial infarction, stroke, recurrent ischemia with rehospitalization, or urgent coronary revascularization. RESULTS: Follow-up in the trial was terminated early after a safety review. After a median follow-up of 502 days (interquartile range, 349 to 667), the primary end point occurred in 1031 of 6473 patients receiving vorapaxar versus 1102 of 6471 patients receiving placebo (Kaplan-Meier 2-year rate, 18.5% vs. 19.9%; hazard ratio, 0.92; 95% confidence interval [CI], 0.85 to 1.01; P=0.07). A composite of death from cardiovascular causes, myocardial infarction, or stroke occurred in 822 patients in the vorapaxar group versus 910 in the placebo group (14.7% and 16.4%, respectively; hazard ratio, 0.89; 95% CI, 0.81 to 0.98; P=0.02). Rates of moderate and severe bleeding were 7.2% in the vorapaxar group and 5.2% in the placebo group (hazard ratio, 1.35; 95% CI, 1.16 to 1.58; P<0.001). Intracranial hemorrhage rates were 1.1% and 0.2%, respectively (hazard ratio, 3.39; 95% CI, 1.78 to 6.45; P<0.001). Rates of nonhemorrhagic adverse events were similar in the two groups. CONCLUSIONS: In patients with acute coronary syndromes, the addition of vorapaxar to standard therapy did not significantly reduce the primary composite end point but significantly increased the risk of major bleeding, including intracranial hemorrhage. (Funded by Merck; TRACER ClinicalTrials.gov number, NCT00527943.)


BACKGROUND: Socioeconomic conditions are not only related to poor health outcomes, they also contribute to the chances of recovery from stroke. This study examines whether income and education were predictors of return to work after a first stroke among persons aged 40-59.

METHODS: All first-stroke survivors aged 40-59 who were discharged from a hospital in 1996-2000 and who had received income from work during the year prior to the stroke were sampled from the Swedish national register of in-patient care (n = 7,081). Income and education variables were included in hazard regressions, modelling the probability of returning to work from one to four years after discharge. Adjustments for age, sex, stroke subtype, and length of in-patient care were included in the models. RESULTS: Both higher income and higher education were associated with higher probability of returning to work. While the association between education and return to work was attenuated by income, individuals with university education were 13 percent more likely to return than those who had completed only compulsory education, and individuals in the highest income quartile were about twice as likely to return as those in the lowest. The association between socioeconomic position and return to work was similar for different stroke subtypes. Income differences between men and women also accounted for women's lower probability of returning to work. CONCLUSIONS: The study demonstrates that education and income were independent predictors of returning to work among stroke patients during the first post-stroke years. Taking the relative risk of return to work among those in the higher socioeconomic positions as the benchmark, there may be considerable room for improvement among patients in lower socioeconomic strata


OBJECTIVE: To evaluate the effectiveness of integrated care for chronic physical diseases and depression in reducing disability and improving quality of life. DESIGN: A randomised controlled
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Maladies liées à l'alcool

(1) CHRISTIE B. Higher taxes on alcohol are the best way to reduce harm, analysis concludes. BMJ. 2011, vol. 343, p.d7758

http://dx.doi.org/10.1186/1471-2458-11-277

BACKGROUND: The increasing popularity and use of the internet makes it an attractive option for providing health information and treatment, including alcohol/other drug use. There is limited research examining how people identify and access information about alcohol or other drug (AOD) use online, or how they assess the usefulness of the information presented. This study examined the strategies that individuals used to identify and navigate a range of AOD websites, along with the attitudes concerning presentation and content. METHODS: Members of the general community in Brisbane and Roma (Queensland, Australia) were invited to participate in a 30-minute search of the internet for sites related to AOD use, followed by a focus group discussion. Fifty one subjects participated in the study across nine focus groups. RESULTS: Participants spent a maximum of 6.5 minutes on any one website, and less if the user was under 25 years of age. Time spent was as little as 2 minutes if the website was not the first accessed. Participants recommended that AOD-related websites should have an engaging home or index page, which quickly and accurately portrayed the site's objectives, and provided clear site navigation options. Website content should clearly match the title and description of the site that is used by internet search engines. Participants supported the development of a portal for AOD websites, suggesting that it would greatly facilitate access and navigation. Treatment programs delivered online were
initially viewed with caution. This appeared to be due to limited understanding of what constituted online treatment, including its potential efficacy. CONCLUSIONS: A range of recommendations arise from this study regarding the design and development of websites, particularly those related to AOD use. These include prudent use of text and information on any one webpage, the use of graphics and colours, and clear, uncluttered navigation options. Implications for future website development are discussed.


BACKGROUND: Heavy alcohol consumption among adolescents and young adults is an issue of significant public concern. With approximately 50% of young people aged 18-24 attending tertiary education, there is an opportunity within these settings to implement programs that target risky drinking. The aim of the current study was to survey students and staff within a tertiary education institution to investigate patterns of alcohol use, alcohol-related problems, knowledge of current National Health and Medical Research Council (NHMRC) guidelines for alcohol consumption and intentions to seek help for alcohol problems. METHODS: Students of an Australian metropolitan university (with staff as a comparison group) participated in a telephone interview. Questions related to knowledge of NHMRC guidelines, drinking behaviour, alcohol-related problems and help-seeking intentions for alcohol problems. Level of psychological distress was also assessed. RESULTS: Of the completed interviews, 774 (65%) were students and 422 (35%) were staff. While staff were more likely to drink regularly, students were more likely to drink heavily. Alcohol consumption was significantly higher in students, in males and in those with a history of earlier onset drinking. In most cases, alcohol-related problems were more likely to occur in students. The majority of students and staff had accurate knowledge of the current NHMRC guidelines, but this was not associated with lower levels of risky drinking. Psychological distress was associated with patterns of risky drinking in students. CONCLUSIONS: Our findings are consistent with previous studies of tertiary student populations, and highlight the disconnect between knowledge of relevant guidelines and actual behaviour. There is a clear need for interventions within tertiary education institutions that promote more effective means of coping with psychological distress and improve help-seeking for alcohol problems, particularly among young men.


BACKGROUND: This study investigates the relationship between parental drinking and school adjustment in a total population sample of adolescents, with independent reports from mothers, fathers, and adolescents. As a group, children of alcohol abusers have previously been found to exhibit lowered academic achievement. However, few studies address which parts of school adjustment that may be impaired. Both a genetic approach and social strains predict elevated problem scores in these children. Previous research has had limitations such as only recruiting cases from clinics, relying on single responders for all measures, or incomplete control for comorbid psychopathology. The specific effects of maternal and paternal alcohol use are also understudied. METHODS: In a Norwegian county, 88% of the population aged 13-19 years participated in a health survey (N = 8984). Among other variables, adolescents reported on four dimensions of school adjustment, while mothers and fathers reported their own drinking behaviour. Mental distress and other control variables were adjusted for. Multivariate analysis including generalized estimation equations was applied to investigate associations. RESULTS: Compared to children of light drinkers, children of alcohol abusers had moderately elevated attention and conduct problem scores. Maternal alcohol abuse was particularly predictive of such problems. Children of abstainers did significantly better than children of light drinkers. Controlling for adolescent mental distress reduced the association between maternal abuse and attention problems. The associations between parental reported drinking and school adjustment were further reduced when controlling for the children's report of seeing their parents drunk, which itself predicted school adjustment. Controlling for parental mental distress did not reduce the
associations. CONCLUSIONS: Parental alcohol abuse is an independent risk factor for attention and conduct problems at school. Some of the risk associated with mothers' drinking is likely to be mediated by adolescent mental distress. Despite lowered adjustment on the externalizing dimensions, children of alcohol abusers report that they enjoy being at school as much as other children.

Paludisme

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ABSTRACT: BACKGROUND: The Africa Malaria Report shows that many countries are quite far from reaching the universal coverage targets of 80% coverage by 2010 and maintain it at this level. This paper examines ITN use and the factors associated with its adoption among the youths in Nigeria. This information will help in the design of effective methods of providing and distributing the nets in order to enhance its adoption and maximize the public health benefits of ITNs. METHODS: This cross-sectional survey was carried out in 2006 among university leavers serving compulsory national service (youth corpers) using total sampling technique. The study was conducted using a self-administered questionnaire. RESULTS: A total of 656 youth corp members were interviewed. Only 23.8% of these youths ever use ITN while 4.3% currently use ITN before reporting in camp. A significant proportion of the youths acquired information on ITN from Mass Media (p = 0.0001). Other statistically significant factors that encourage the use of ITN include inexpensive market price of ITN (p = 0.0001), frequency of Malaria infestation (p = 0.019) and perceived malaria preventive action of ITN (p = 0.000). Following logistic regression analysis, perceived effective malaria preventive action of ITN [OR = 29.3, C.I = 17.17-50.0] and high frequency of Malaria infestation [OR = 1.55, C.I = 0.97-2.47] were predictors of ITN use. CONCLUSION: The study shows that the use of ITN for the prevention of Malaria is low among these Nigerian youths. The major factors determining the adoption of ITN among the youths were perceived effective Malaria prevention action of ITN and high frequency of Malaria attack. These factors should be considered in the design of sustainable and effective locally relevant strategies for scale-up adoption of ITNs among a youthful African population

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OBJECTIVE: To examine the association between malaria and HIV prevalence in East sub-Saharan Africa. METHODS: Using large nationally representative samples of 19,735 sexually active adults from the 2003-04 HIV/AIDS indicator surveys conducted in Kenya, Malawi and Tanzania, and the atlas malaria project, we analysed the relationship between malaria and HIV prevalence adjusting for important socioeconomic and biological cofactors. RESULTS: In adjusted models, individuals who live in areas with high Plasmodium falciparum parasite rate (PfPR > 0.42) had increased estimated odds of being HIV positive than individuals who live in areas with low P. falciparum parasite rate (PfPR <= 0.10) [men: estimated odds ratio (OR) 2.24, 95% confidence interval (CI) 1.62-3.12; women: estimated OR 2.44, 95% CI 1.85-3.21]. CONCLUSION: This is the first study to report malaria as a risk factor of concurrent HIV infection at the population level. According to our results, individuals who live in areas with high P. falciparum parasite rate have about twice the risk of being HIV positive compared with individuals who live in areas with low P. falciparum parasite rate. Our work emphasizes the need for field studies focused on quantifying...
the interaction among parasitic infections and risk of HIV infection, and studies to explore the impact of control interventions. Programmes focused on reducing malaria transmission will be important to address, especially in HIV-infected individuals.


The hemoglobins S and C protect carriers from severe Plasmodium falciparum malaria. Here, we found that these hemoglobinopathies affected the trafficking system that directs parasite-encoded proteins to the surface of infected erythrocytes. Cryoelectron tomography revealed that the parasite generated a host-derived actin cytoskeleton within the cytoplasm of wild-type red blood cells that connected the Maurer's clefts with the host cell membrane and to which transport vesicles were attached. The actin cytoskeleton and the Maurer's clefts were aberrant in erythrocytes containing hemoglobin S or C. Hemoglobin oxidation products, enriched in hemoglobin S and C erythrocytes, inhibited actin polymerization in vitro and may account for the protective role in malaria.


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Malaria poses a significant public health burden in the remote areas of western Cambodia, where access to health services and information is limited. Recognizing the potential of village malaria workers to reach these communities, the US Agency for International Development-funded Malaria Control in Cambodia project used a multipronged approach to strengthen the village malaria workers network. As a result, the proportion of confirmed malaria cases treated by village malaria workers has doubled during the past 2 years, significantly increasing the numbers being properly diagnosed and treated. Key to the program's success has been the integration of village malaria workers with public health facilities, improved patient access to prompt diagnosis and treatment, and resolution of systemic barriers such as logistics for rapid diagnostic tests.


Most malaria drug development focuses on parasite stages detected in red blood cells, even though, to achieve eradication, next-generation drugs active against both erythrocytic and exo-erythrocytic forms would be preferable. We applied a multifactorial approach to a set of >4000 commercially available compounds with previously demonstrated blood-stage activity (median inhibitory concentration < 1 micromolar) and identified chemical scaffolds with potent activity against both forms. From this screen, we identified an imidazolopiperazine scaffold series that was highly enriched among compounds active against Plasmodium liver stages. The orally bioavailable lead imidazolopiperazine confers complete causal prophylactic protection (15 milligrams/kilogram) in rodent models of malaria and shows potent in vivo blood-stage therapeutic activity. The open-source chemical tools resulting from our effort provide starting points for future
drug discovery programs, as well as opportunities for researchers to investigate the biology of exo-erythrocytic forms.

(9) MOSZYNSKI P. Control efforts aren't enough for malaria targets in millennium development goals to be met, warns WHO. BMJ. 2011, vol. 343, p.d8079


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OBJECTIVES: To estimate the impact of the Integrated Management of Childhood Illness (IMCI) strategy on early-childhood mortality, we evaluated a malaria-control project in Benin that implemented IMCI and promoted insecticide-treated nets (ITNs). METHODS: We conducted a before-and-after intervention study that included a nonrandomized comparison group. We used the preceding birth technique to measure early-childhood mortality (risk of dying before age 30 months), and we used health facility surveys and household surveys to measure process indicators. RESULTS: Most process indicators improved in the area covered by the intervention. Notably, because ITNs were also promoted in the comparison area children's ITN use increased by about 20 percentage points in both areas. Regarding early-childhood mortality, the trend from baseline (1999-2001) to follow-up (2002-2004) for the intervention area (13.0% decrease; P < .001) was 14.1% (P < .001) lower than was the trend for the comparison area (1.3% increase; P = .46). CONCLUSIONS: Mortality decreased in the intervention area after IMCI and ITN promotion. ITN use increased similarly in both study areas, so the mortality impact of ITNs in the 2 areas might have canceled each other out. Thus, the mortality reduction could have been primarily attributable to IMCI's effect on health care quality and care-seeking.

(12) TORJESEN I. Discovery of "essential receptor" on red blood cells raises hope of effective malaria vaccine. BMJ. 2011, vol. 343, p.d7278

Pathologies liées à l'obésité

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BACKGROUND: The role of the duration of obesity as an independent risk factor for mortality has not been investigated. The aim of this study was to analyse the association between the duration of obesity and the risk of mortality. METHODS: A total of 5036 participants (aged 28-62 years) of the Framingham Cohort Study were followed up every 2 years from 1948 for up to 48 years. The association between obesity duration and all-cause and cause-specific mortality was analysed.
using time-dependent Cox models adjusted for body mass index. The role of biological intermediates and chronic diseases was also explored. RESULTS: The adjusted hazard ratio (HR) for mortality increased as the number of years lived with obesity increased. For those who were obese for 1-4.9, 5-14.9, 15-24.9 and >/= 25 years of the study follow-up period, adjusted HRs for all-cause mortality were 1.51 (95% confidence interval (CI) 1.27-1.79), 1.94 (95% CI 1.71-2.20), 2.25 (95% CI 1.89-2.67) and 2.52 (95% CI 2.08-3.06), respectively, compared with those who were never obese. A dose-response relation between years of duration of obesity was also clear for all-cause, cardiovascular, cancer and other-cause mortality. For every additional 2 years of obesity, the HRs for all-cause, cardiovascular disease, cancer and other-cause mortality were 1.06 (95% CI 1.05-1.07), 1.07 (95% CI 1.05-1.08), 1.03 (95% CI 1.01-1.05) and 1.07 (95% CI 1.05-1.11), respectively. CONCLUSIONS: The number of years lived with obesity is directly associated with the risk of mortality. This needs to be taken into account when estimating its burden on mortality


Adipose tissue mass is determined by the storage and removal of triglycerides in adipocytes. Little is known, however, about adipose lipid turnover in humans in health and pathology. To study this in vivo, here we determined lipid age by measuring (14)C derived from above ground nuclear bomb tests in adipocyte lipids. We report that during the average ten-year lifespan of human adipocytes, triglycerides are renewed six times. Lipid age is independent of adipocyte size, is very stable across a wide range of adult ages and does not differ between genders. Adipocyte lipid turnover, however, is strongly related to conditions with disturbed lipid metabolism. In obesity, triglyceride removal rate (lipolysis followed by oxidation) is decreased and the amount of triglycerides stored each year is increased. In contrast, both lipid removal and storage rates are decreased in non-obese patients diagnosed with the most common hereditary form of dyslipidaemia, familial combined hyperlipidaemia. Lipid removal rate is positively correlated with the capacity of adipocytes to break down triglycerides, as assessed through lipolysis, and is inversely related to insulin resistance. Our data support a mechanism in which adipocyte lipid storage and removal have different roles in health and pathology. High storage but low triglyceride removal promotes fat tissue accumulation and obesity. Reduction of both triglyceride storage and removal decreases lipid shunting through adipose tissue and thus promotes dyslipidaemia. We identify adipocyte lipid turnover as a novel target for prevention and treatment of metabolic disease

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Deaf people who use American Sign Language (ASL) are medically underserved and often excluded from health research and surveillance. We used a community participatory approach to develop and administer an ASL-accessible health survey. We identified deaf community strengths (e.g., a low prevalence of current smokers) and 3 glaring health inequities: obesity, partner violence, and suicide. This collaborative work represents the first time a deaf community has used its own data to identify health priorities

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In the past two decades, research on the sociology of diagnosis has attained considerable influence within medical sociology. Analyzing the process and factors that contribute to making a diagnosis amidst uncertainty and contestation, as well as the diagnostic encounter itself, are topics rich for sociological investigation. This paper provides a reformulation of the sociology of
diagnosis by proposing the concept of ‘social diagnosis’ which helps us recognize the interplay between larger social structures and individual or community illness manifestations. By outlining a conceptual frame, exploring how social scientists, medical professionals and laypeople contribute to social diagnosis, and providing a case study of how the North American Mohawk Akwesasne reservation dealt with rising obesity prevalence to further illustrate the social diagnosis idea, we embark on developing a cohesive and updated framework for a sociology of diagnosis. This approach is useful not just for sociological research, but has direct implications for the fields of medicine and public health. Approaching diagnosis from this integrated perspective potentially provides a broader context for practitioners and researchers to understand extra-medical factors, which in turn has consequences for patient care and health outcomes.


OBJECTIVES: To investigate the association between walkability and obesity, we studied adults residing in Baltimore City, Maryland, in neighborhoods of varying racial and socioeconomic composition. METHODS: We conducted a cross-sectional study of 3493 participants from the study Healthy Aging in Neighborhoods of Diversity across the Life Span. We used the Pedestrian Environment Data Scan to measure neighborhood walkability in 34 neighborhoods of diverse racial and socioeconomic composition in which the study participants lived. Confirmatory factor analysis was used to determine walkability scores. Multilevel modeling was used to determine prevalence ratios for the association between walkability and obesity. RESULTS: Among individuals living in predominately White and high-socioeconomic status (SES) neighborhoods, residing in highly walkable neighborhoods was associated with a lower prevalence of obesity when compared with individuals living in poorly walkable neighborhoods, after adjusting for individual-level demographic variables (prevalence ratio-[PR] = 0.58; P = <.001 vs PR = 0.80; P = .004). Prevalence ratios were similar after controlling for the perception of crime, physical activity, and main mode of transportation. The association between walkability and obesity for individuals living in low-SES neighborhoods was not significant after accounting for main mode of transportation (PR = 0.85; P = .060). CONCLUSIONS: Future research is needed to determine how differences in associations by neighborhood characteristics may contribute to racial disparities in obesity.


How does the composition of a population affect the adoption of health behaviors and innovations? Homophily--similarity of social contacts--can increase dyadic-level influence, but it can also force less healthy individuals to interact primarily with one another, thereby excluding them from interactions with healthier, more influential, early adopters. As a result, an important network-level effect of homophily is that the people who are most in need of a health innovation may be among the least likely to adopt it. Despite the importance of this thesis, confounding factors in observational data have made it difficult to test empirically. We report results from a controlled experimental study on the spread of a health innovation through fixed social networks in which the level of homophily was independently varied. We found that homophily significantly increased overall adoption of a new health behavior, especially among those most in need of it.


BACKGROUND: Determinants of public healthcare expenditures in type 2 diabetics are not well investigated in developing nations and, therefore, it is not clear if higher physical activity decreases healthcare costs. The purpose of this study was to analyze the relationship between...
physical activity and the expenditures in public healthcare on type 2 diabetes mellitus treatment. METHODS: Cross-sectional study carried out in Brazil. A total of 121 type 2 diabetics attended to in two Basic Healthcare Units were evaluated. Public healthcare expenditures in the last year were estimated using a specific standard table. Also evaluated were: socio-demographic variables; chronological age; exogenous insulin use; smoking habits; fasting glucose test; diabetic neuropathy and anthropometric measures. Habitual physical activity was assessed by questionnaire. RESULTS: Age (r = 0.20; p = 0.023), body mass index (r = 0.33; p = 0.001) and waist-to-hip ratio (r = 0.20; p = 0.025) were positively related to expenditures on medication for the treatment of diseases other than diabetes. Insulin use was associated with increased expenditures. Higher physical activity was associated with lower expenditure, provided medication for treatment of diseases other than diabetes (OR = 0.19; p = 0.007) and medical consultations (OR = 0.26; p = 0.029). CONCLUSIONS: Type 2 diabetics with higher enrollment in physical activity presented consistently lower healthcare expenditures for the public healthcare system.


BACKGROUND: Sub-Saharan Africa (SSA) has a disproportionate burden of both infectious and chronic diseases compared with other world regions. Current disease estimates for SSA are based on sparse data, but projections indicate increases in non-communicable diseases (NCDs) caused by demographic and epidemiologic transitions. We review the literature on NCDs in SSA and summarize data from the World Health Organization and International Agency for Research on Cancer on the prevalence and incidence of cardiovascular diseases, diabetes mellitus Type 2, cancer and their risk factors. METHODS: We searched the PubMed database for studies on each condition, and included those that were community based, conducted in any SSA country and reported on disease or risk factor prevalence, incidence or mortality. RESULTS: We found few community-based studies and some countries (such as South Africa) were over-represented. The prevalence of NCDs and risk factors varied considerably between countries, urban/rural location and other sub-populations. The prevalence of stroke ranged from 0.07 to 0.3%, diabetes mellitus from 0 to 16%, hypertension from 6 to 48%, obesity from 0.4 to 43% and current smoking from 0.4 to 71%. Hypertension prevalence was consistently similar among men and women, whereas women were more frequently obese and men were more frequently current smokers. CONCLUSIONS: The prevalence of NCDs and their risk factors is high in some SSA settings. With the lack of vital statistics systems, epidemiologic studies with a variety of designs (cross-sectional, longitudinal and interventional) capable of in-depth analyses of risk factors could provide a better understanding of NCDs in SSA, and inform health-care policy to mitigate the oncoming NCD epidemic.


BACKGROUND: Since stress is hypothesized to play a role in the etiology of obesity during adolescence, research on associations between adolescent stress and obesity-related
parameters and behaviours is essential. Due to lack of a well-established recent stress checklist for use in European adolescents, the study investigated the reliability and validity of the Adolescent Stress Questionnaire (ASQ) for assessing perceived stress in European adolescents. METHODS: The ASQ was translated into the languages of the participating cities (Ghent, Stockholm, Vienna, Zaragoza, Pecs and Athens) and was implemented within the HELENA cross-sectional study. A total of 1140 European adolescents provided a valid ASQ, comprising 10 component scales, used for internal reliability (Cronbach alpha) and construct validity (confirmatory factor analysis or CFA). Contributions of socio-demographic (gender, age, pubertal stage, socio-economic status) characteristics to the ASQ score variances were investigated. Two-hundred adolescents also provided valid saliva samples for cortisol analysis to compare with the ASQ scores (criterion validity). Test-retest reliability was investigated using two ASQ assessments from 37 adolescents. RESULTS: Cronbach alpha-values of the ASQ scales (0.57 to 0.88) demonstrated a moderate internal reliability of the ASQ, and intraclass correlation coefficients (0.45 to 0.84) established an insufficient test-retest reliability of the ASQ. The adolescents’ gender (girls had higher stress scores than boys) and pubertal stage (those in a post-pubertal development had higher stress scores than others) significantly contributed to the variance in ASQ scores, while their age and socio-economic status did not. CFA results showed that the original scale construct fitted moderately with the data in our European adolescent population. Only in boys, four out of 10 ASQ scale scores were a significant positive predictor for baseline wake-up salivary cortisol, suggesting a rather poor criterion validity of the ASQ, especially in girls. CONCLUSIONS: In our European adolescent sample, the ASQ had an acceptable internal reliability and construct validity and the adolescents’ gender and pubertal stage systematically contributed to the ASQ variance, but its test-retest reliability and criterion validity were rather poor. Overall, the utility of the ASQ for assessing perceived stress in adolescents across Europe is uncertain and some aspects require further examination.


Obesity is a well-established risk factor for endometrial cancer, the most common gynecologic malignancy. Recent genome-wide association studies (GWAS) have identified multiple genetic markers for obesity. The authors evaluated the association of obesity-related single nucleotide polymorphisms (SNPs) with endometrial cancer using GWAS data from their recently completed study, the Shanghai Endometrial Cancer Genetics Study, which comprised 832 endometrial cancer cases and 2,049 controls (1996-2005). Thirty-five SNPs previously associated with obesity or body mass index (BMI; weight (kg)/height (m)(2)) at a minimum significance level of \( p \leq 5 \times 10^{-7} \) in the US National Human Genome Research Institute's GWAS catalog (http://genome.gov/gwastudies) and representing 26 unique loci were evaluated by either direct genotyping or imputation. The authors found that for 22 of the 26 unique loci tested (84.6%), the BMI-associated risk variants were present at a higher frequency in cases than in population controls (\( P = 0.0003 \)). Multiple regression analysis showed that 9 of 35 BMI-associated variants, representing 7 loci, were significantly associated (\( p <= 0.05 \)) with the risk of endometrial cancer; for all but 1 SNP, the direction of association was consistent with that found for BMI. For consistent SNPs, the allelic odds ratios ranged from 1.15 to 1.29. These 7 loci are in the SEC16B/RASAL, TMEM18, MSRA, SOX6, MTCH2, FTO, and MC4R genes. The associations persisted after adjustment for BMI, suggesting that genetic markers of obesity provide value in addition to BMI in predicting endometrial cancer risk.

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This research explores commonplace discursive depictions of obesity surgery and individual patients’ reactions to these depictions. Data come from a content analysis of weight loss surgery representations in periodical articles (\( n = 32 \)) and open-ended surveys (\( n = 55 \)) and interviews (\( n \).
with surgery patients from 34 US states. This study reveals that mainstream periodicals frequently stigmatized patients as obesity surgery is cast as (1) medically risky, (2) extravagant and (3) an overly easy escape from obesity. Surgery is only portrayed as (4) acceptable when multiple other weight loss techniques had been tried unsuccessfully. In contrast, interview and survey data show individual patients are aware of, yet frequently refute, these surgical stigmas. Findings demonstrate the importance of weight loss surgery patients' personal experiences, interactions and education in shaping their responses to stigma. Patients view themselves as expert insiders who negotiate dominant discourses and, consequently, assert that surgery and surgery patients are ethical. Research results reveal the importance of perceived expert insider status and interpretive practice in managing obesity surgery stigma.


The World Health Organization estimates that the number of obese and overweight adults has increased to 1.6 billion, with concomitant increases in comorbidity. While genetic factors for obesity have been extensively studied in Caucasians, fewer studies have investigated genetic determinants of body mass index (BMI; weight (kg)/height (m)(2)) in African Americans. A total of 38 genes and 1,086 single nucleotide polymorphisms (SNPs) in African Americans (n = 1,173) and 897 SNPs in Caucasians (n = 1,165) were examined in the Southern Community Cohort Study (2002-2009) for associations with BMI and gene x environment interactions. A statistically significant association with BMI survived correction for multiple testing at rs4140535 (beta = -0.04, 95% confidence interval: -0.06, -0.02; P = 5.76 x 10(-5)) in African Americans but not in Caucasians. Gene-environment interactions were observed with cigarette smoking and a SNP in ADIPOR1 in African Americans, as well as between a different SNP in ADIPOR1 and physical activity in Caucasians. A SNP in PPARGC1A interacted with alcohol consumption in African Americans, and a different SNP in PPARGC1A was nominally associated in Caucasians. A SNP in CYP19A1 interacted with dietary energy intake in African Americans, and another SNP in CYP191A had an independent association with BMI in Caucasians.

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BACKGROUND: The rising burden of obesity in Tonga is alarming. The promotion of healthy behaviours and environments requires immediate urgent action and a multi-sectoral approach. A three-year community based study titled the Ma'alahi Youth Project (MYP) conducted in Tonga from 2005-2008 aimed to increase the capacity of the whole community (schools, churches, parents and adolescents) to promote healthy eating and regular physical activity and to reduce the prevalence of overweight and obesity amongst youth and their families. This paper reflects on the process evaluation for MYP, against a set of Best Practice Principles for community-based obesity prevention. METHODS: MYP was managed by the Fiji School of Medicine. A team of five staff in Tonga were committed to planning, implementation and evaluation of a strategic plan, the key planks of which were developed during a two day community workshop. Intervention activities were delivered in villages, churches and schools, on the main island of Tongatapu. Process evaluation data covering the resource utilisation associated with all intervention activities were collected, and analysed by dose, frequency and reach for specific strategies. The action plan included three standard objectives around capacity building, social marketing and evaluation; four nutrition; two physical activity objectives; and one around championing key people as role models. RESULTS: While the interventions included a wide mix of activities straddling across all of these objectives and in both school and village settings, there was a major focus on the social marketing and physical activity objectives. The intervention reach, frequency and dose varied widely across all activities, and showed no consistent patterns. CONCLUSIONS: The adolescent obesity interventions implemented as part of the MYP program comprised a wide range of activities
conducted in multiple settings, touched a broad spectrum of the population (wider than the target group), but the dose and frequency of activities were generally insufficient and not sustained. Also the project confirmed that, while the MYP resulted in increased community awareness of healthy behaviours, Tonga is still in its infancy in terms of conducting public health research and lacks research infrastructure and capacity.


OBJECTIVES: We examined the associations of fast food restaurant (FFR) availability with dietary intake and weight among African Americans in the southeastern United States.

METHODS: We investigated cross-sectional associations of FFR availability with dietary intake and body mass index (BMI) and waist circumference in 4740 African American Jackson Heart Study participants (55.2 +/- 12.6 years, 63.3% women). We estimated FFR availability using circular buffers with differing radii centered at each participant's geocoded residential location.

RESULTS: We observed no consistent associations between FFR availability and BMI or waist circumference. Greater FFR availability was associated with higher energy intake among men and women younger than 55 years, even after adjustment for individual socioeconomic status. For each standard deviation increase in 5-mile FFR availability, the energy intake increased by 138 kilocalories (confidence interval [CI] = 70.53, 204.75) for men and 58 kilocalories (CI = 8.55, 105.97) for women. We observed similar associations for the 2-mile FFR availability, especially in men. FFR availability was also unexpectedly positively associated with total fiber intake.

CONCLUSIONS: FFR availability may contribute to greater energy intake in younger African Americans who are also more likely to consume fast food.


OBJECTIVES: We aimed to test the hypothesized role of shared body size norms in the social contagion of body size and obesity. METHODS: Using data collected in 2009 from 101 women and 812 of their social ties in Phoenix, Arizona, we assessed the indirect effect of social norms on shared body mass index (BMI) measured in 3 different ways. RESULTS: We confirmed Christakis and Fowler's basic finding that BMI and obesity do indeed cluster socially, but we found that body size norms accounted for only a small portion of this effect (at most 20%) and only via 1 of the 3 pathways. CONCLUSIONS: If shared social norms play only a minor role in the social contagion of obesity, interventions targeted at changing ideas about appropriate BMIs or body sizes may be less useful than those working more directly with behaviors, for example, by changing eating habits or transforming opportunities for and constraints on dietary intake.
Both obesity and being underweight have been associated with increased mortality. Underweight, defined as a body mass index (BMI) $\leq 18.5$ kg per m$^2$ in adults and $\leq -2$ standard deviations from the mean in children, is the main sign of a series of heterogeneous clinical conditions including failure to thrive, feeding and eating disorder and/or anorexia nervosa. In contrast to obesity, few genetic variants underlying these clinical conditions have been reported. We previously showed that hemizygosity of a approximately 600-kilobase (kb) region on the short arm of chromosome 16 causes a highly penetrant form of obesity that is often associated with hyperphagia and intellectual disabilities. Here we show that the corresponding reciprocal duplication is associated with being underweight. We identified 138 duplication carriers (including 132 novel cases and 108 unrelated carriers) from individuals clinically referred for developmental or intellectual disabilities (DD/ID) or psychiatric disorders, or recruited from population-based cohorts. These carriers show significantly reduced postnatal weight and BMI. Half of the boys younger than five years are underweight with a probable diagnosis of failure to thrive, whereas adult duplication carriers have an 8.3-fold increased risk of being clinically underweight. We observe a trend towards increased severity in males, as well as a depletion of male carriers among non-medically ascertained cases. These features are associated with an unusually high frequency of selective and restrictive eating behaviours and a significant reduction in head circumference. Each of the observed phenotypes is the converse of one reported in carriers of deletions at this locus. The phenotypes correlate with changes in transcript levels for genes mapping within the duplication but not in flanking regions. The reciprocal impact of these 16p11.2 copy-number variants indicates that severe obesity and being underweight could have mirror aetiologies, possibly through contrasting effects on energy balance.
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BACKGROUND: Childhood obesity is becoming an equally challenging, yet under-recognized, problem in developing countries including Pakistan. Children and adolescents are worst affected with an estimated 10% of the world's school-going children being overweight and one quarter of these being obese. The study aimed to assess prevalence and socioeconomic correlates of overweight and obesity, and trend in prevalence statistics, among Pakistani primary school children. METHODS: A population-based cross-sectional study was conducted with a representative multistage cluster sample of 1860 children aged 5-12 years in Lahore, Pakistan. Overweight (> + 1SD) and obesity (> + 2SD) were defined using the World Health Organization child growth reference 2007. Chi-square test was used as the test of trend. Linear regression was used to examine the predictive power of independent variables in relation to BMI. Logistic regression was used to quantify the independent predictors for overweight and adjusted odds ratios (aOR) with 95% confidence intervals (CI) were obtained. All regression analyses were controlled for age and gender and statistical significance was considered at P < 0.05. RESULTS: Seventeen percent (95% CI 15.4-18.8) children were overweight and 7.5% (95% CI 6.5-8.7) were obese. Higher prevalence of obesity was observed among boys than girls (P = 0.028), however, there was no gender disparity in overweight prevalence. Prevalence of overweight showed a significantly increasing trend with grade (P < 0.001). Children living in the urban area with high socioeconomic status (SES) were significantly at risk for being overweight and obese (both P < 0.001) as compared to children living in the urban area with lower SES and rural children. Being in higher grade (aOR 2.39, 95% CI 1.17-4.90) and living in the urban area with higher SES (aOR 18.10, 95% CI 10.24-32.00) independently predicted the risk of being overweight. CONCLUSION: Alarmingly rapid rise in overweight and obesity among Pakistani primary school children was observed, especially among the affluent urban population. The findings support the urgent need for National preventive strategy for childhood obesity and targeted interventions tailored to local circumstances with meaningful involvement of communities

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BACKGROUND: Growing levels of both obesity and chronic disease in the general population pose a major public health problem. In the UK, an innovative 'health and weight' cohort trials facility, the 'South Yorkshire Cohort', is being built in order to provide robust evidence to inform policy, commissioning and clinical decisions in this field. This protocol reports the design of the facility and outlines the recruitment phase methods. METHOD/DESIGN: The South Yorkshire Cohort health and weight study uses the cohort multiple randomised controlled trial design. This design recruits a large observational cohort of patients with the condition(s) of interest which then provides a facility for multiple randomised controlled trials (with large representative samples of participants, long term outcomes as standard, increased comparability between each trial conducted within the cohort and increased efficiency particularly for trials of expensive interventions) as well as ongoing information as to the natural history of the condition and treatment as usual. This study aims to recruit 20,000 participants to the population based South Yorkshire Cohort health and weight research trials facility. Participants are recruited by invitation letters from their General Practitioners. Data is collected using postal and/or online patient self-completed Health Questionnaires. NHS numbers will be used to facilitate record linkage and access to routine data. Participants are eligible if they are: aged 16 - 85 years, registered with one of 40 practices in South Yorkshire, provide consent for further contact from the researchers and to have their information used to look at the benefit of health treatments. The first wave of data is
being collected during 2010/12 and further waves are planned at 2 - 5 year intervals for the planned 20 year duration of the facility. DISCUSSION: The South Yorkshire Cohort combines the strengths of the standard observational, longitudinal cohort study design with a population based cohort facility for multiple randomised controlled trials in a range of long term health and weight related conditions (including obesity). This infrastructure will allow the rapid and cheap identification and recruitment of patients, and facilitate the provision of robust evidence to inform the management and self-management of health and weight.


Identifying interesting relationships between pairs of variables in large data sets is increasingly important. Here, we present a measure of dependence for two-variable relationships: the maximal information coefficient (MIC). MIC captures a wide range of associations both functional and not, and for functional relationships provides a score that roughly equals the coefficient of determination (R(2)) of the data relative to the regression function. MIC belongs to a larger class of maximal information-based nonparametric exploration (MINE) statistics for identifying and classifying relationships. We apply MIC and MINE to data sets in global health, gene expression, major-league baseball, and the human gut microbiota and identify known and novel relationships.

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BACKGROUND: The influence of socioeconomic status (SES) on cardiovascular diseases and risk factors is widely known, although the role of different SES indicators is not fully understood. The aim of this study was to investigate the role of different SES indicators for cardiovascular disease risk factors in a middle and old aged East German population. METHODS: Cross-sectional data of an East German population-based cohort study (1779 men and women aged 45 to 83) were used to assess the association of childhood and adulthood SES indicators (childhood SES, education, occupational position, income) with cardiovascular risk factors. Adjusted means and odds ratios of risk factors by SES indicators with 95% confidence intervals (CI) were calculated by linear and logistic regression models, stratified by sex. The interaction effect of education and age on cardiovascular risk factors was tested by including an interaction term. RESULTS: In age-adjusted models, education, occupational position, and income were statistically significantly associated with abdominal obesity in men, and with smoking in both sexes. Men with low education had a more than threefold risk of being a smoker (OR 3.44, CI 1.58-7.51). Low childhood SES was associated with higher systolic blood pressure and abdominal obesity in women (OR 2.27, CI 1.18-4.38 for obesity); a non-significant but (in terms of effect size) relevant association of childhood SES with smoking was observed in men. In women, age was an effect modifier for education in the risk of obesity and smoking. CONCLUSIONS: We found considerable differences in cardiovascular risk factors by education, occupational position, income, and partly by childhood social status, differing by sex. Some social inequalities levelled off in higher age. Longitudinal studies are needed to differentiate between age and birth cohort effects.

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BACKGROUND: An optimal level of physical activity (PA) in adolescence influences the level of PA in adulthood. Although PA declines with age have been demonstrated repeatedly, few studies have been carried out on secular trends. The present study assessed levels, types and secular trends of PA and sedentary behaviour of a sample of adolescents in the Czech Republic. METHODS: The study comprised two cross-sectional cohorts of adolescents ten years apart. The
analysis compared data collected through a week-long monitoring of adolescents' PA in 1998-2000 and 2008-2010. Adolescents wore either Yamax SW-701 or Omron HJ-105 pedometer continuously for 7 days (at least 10 hours per day) excluding sleeping, hygiene and bathing. They also recorded their number of steps per day, the type and duration of PA and sedentary behaviour (in minutes) on record sheets. In total, 902 adolescents (410 boys; 492 girls) aged 14-18 were eligible for analysis. RESULTS: Overweight and obesity in Czech adolescents participating in this study increased from 5.5% (older cohort, 1998-2000) to 10.4% (younger cohort, 2008-2010). There were no inter-cohort significant changes in the total amount of sedentary behaviour in boys. However in girls, on weekdays, there was a significant increase in the total duration of sedentary behaviour of the younger cohort (2008-2010) compared with the older one (1998-2000). Studying and screen time (television and computer) were among the main sedentary behaviours in Czech adolescents. The types of sedentary behaviour also changed: watching TV (1998-2000) was replaced by time spent on computers (2008-2010). The Czech health-related criterion (achieving 11,000 steps per day) decreased only in boys from 68% (1998-2000) to 55% (2008-2010). Across both genders, 55%-75% of Czech adolescents met the health-related criterion of recommended steps per day, however less participants in the younger cohort (2008-2010) met this criterion than in the older cohort (1998-2000) ten years ago. Adolescents' PA levels for the monitored periods of 1998-2000 and 2008-2010 suggest a secular decrease in the weekly number of steps achieved by adolescent boys and girls. CONCLUSION: In the younger cohort (2008-2010), every tenth adolescent was either overweight or obese; roughly twice the rate when compared to the older cohort (1998-2000). Sedentary behaviour seems relatively stable across the two cohorts as the increased time that the younger cohort (2008-2010) spent on computers is compensated with an equally decreased time spent watching TV or studying. Across both cohorts about half to three quarters of the adolescents met the health-related criterion for achieved number of steps. The findings show a secular decrease in PA amongst adolescents. The significant interaction effects (cohort x age; and cohort x gender) that this study found suggested that secular trends in PA differ by age and gender


BACKGROUND: Up to this date, prevalence rates of obesity are still rising. Aside from co-morbid diseases, perceived discrimination and stigmatization leads to worsen outcomes in obese individuals. Higher stigmatizing attitudes towards obese individuals may also result in less support of preventive and interventive measures. In light of the immense burden of obesity on health care systems and also on the individuals' quality of life, accepted and subsidized preventive measures are needed. Policy support might be determined by views of the lay public on causes of obesity and resulting weight stigma. This study seeks to answer how representative samples of the lay public perceive people with obesity or overweight status (stigmatizing attitudes); what these samples attribute obesity to (causal attribution) and what types of interventions are supported by the lay public and which factors determine that support (prevention support). METHODS: A systematic literature search was conducted. All studies of representative samples reporting results on (a) stigmatizing attitudes towards overweight and obese individuals, (b) causal beliefs and (c) prevention support were included. RESULTS: Only 7 articles were found. One study reported prevalence rates of stigmatizing attitudes. About a quarter of the population in Germany displayed definite stigmatizing attitudes. Other studies reported causal attributions. While external influences on weight are considered as well, it seems that internal factors are rated to be of higher importance. Across the studies found, regulative prevention is supported by about half of the population, while childhood prevention has highest approval rates. Results on sociodemographic determinants differ substantially. CONCLUSIONS: Further research on public attitudes toward and perception of overweight and obesity is urgently needed to depict the prevailing degree of stigmatization. Introducing a multidimensional concept of the etiology of obesity to the lay public might be a starting point in stigma reduction
(37) SIMPSON SA, SHAW C, MCNAMARA R. What is the most effective way to maintain weight loss in adults? BMJ. 2011, vol. 343, p.d8042


CONTEXT: Obesity is a risk factor for cardiovascular events. Weight loss might protect against cardiovascular events, but solid evidence is lacking. OBJECTIVE: To study the association between bariatric surgery, weight loss, and cardiovascular events. DESIGN, SETTING, AND PARTICIPANTS: The Swedish Obese Subjects (SOS) study is an ongoing, nonrandomized, prospective, controlled study conducted at 25 public surgical departments and 480 primary health care centers in Sweden of 2010 obese participants who underwent bariatric surgery and 2037 contemporaneously matched obese controls who received usual care. Patients were recruited between September 1, 1987, and January 31, 2001. Date of analysis was December 31, 2009, with median follow-up of 14.7 years (range, 0-20 years). Inclusion criteria were age 37 to 60 years and a body mass index of at least 34 in men and at least 38 in women. Exclusion criteria were identical in surgery and control patients. Surgery patients underwent gastric bypass (13.2%), banding (18.7%), or vertical banded gastroplasty (68.1%), and controls received usual care in the Swedish primary health care system. Physical and biochemical examinations and database cross-checks were undertaken at preplanned intervals. MAIN OUTCOME MEASURES: The primary end point of the SOS study (total mortality) was published in 2007. Myocardial infarction and stroke were predefined secondary end points, considered separately and combined. RESULTS: Bariatric surgery was associated with a reduced number of cardiovascular deaths (28 events among 2010 patients in the surgery group vs 49 events among 2037 patients in the control group; adjusted hazard ratio [HR], 0.47; 95% CI, 0.29-0.76; P = .002). The number of total first time (fatal or nonfatal) cardiovascular events (myocardial infarction or stroke, whichever came first) was lower in the surgery group (199 events among 2010 patients) than in the control group (234 events among 2037 patients; adjusted HR, 0.67; 95% CI, 0.54-0.83; P < .001). CONCLUSION: Compared with usual care, bariatric surgery was associated with reduced number of cardiovascular deaths and lower incidence of cardiovascular events in obese adults.

(39) SWEET M. Childhood obesity can be prevented, says Cochrane. BMJ. 2011, vol. 343, p.d8014


http://dx.doi.org/10.1056/NEJMc1113675#SA2

(43) WISE J. UK government disbands advisory group on obesity. BMJ. 2011, vol. 343, p.d7425
SIDA


Antibodies against the CD4 binding site (CD4bs) on the HIV-1 spike protein gp120 can show exceptional potency and breadth. We determined structures of NIH45-46, a more potent clonal variant of VRC01, alone and bound to gp120. Comparisons with VRC01-gp120 revealed that a four-residue insertion in heavy chain complementarity-determining region 3 (CDRH3) contributed to increased interaction between NIH45-46 and the gp120 inner domain, which correlated with enhanced neutralization. We used structure-based design to create NIH45-46(G54W), a single substitution in CDRH2 that increases contact with the gp120 bridging sheet and improves breadth and potency, critical properties for potential clinical use, by an order of magnitude. Together with the NIH45-46-gp120 structure, these results indicate that gp120 inner domain and bridging sheet residues should be included in immunogens to elicit CD4bs antibodies

(4) GULLAND A. Middle income countries need to "share the burden" of the fight against HIV and AIDS. BMJ. 2011, vol. 343, p.d7765 http://www.ncbi.nlm.nih.gov/pubmed/22131209


ABSTRACT: BACKGROUND: Tuberculosis (TB) remains one of the most important infectious diseases worldwide. A comprehensive approach towards disease control that addresses social factors including stigma is now advocated. Patients with TB report fears of isolation and rejection that may lead to delays in seeking care and could affect treatment adherence. Qualitative studies have identified socio-demographic, TB knowledge, and clinical determinants of TB stigma, but only one prior study has quantified these associations using formally developed and validated stigma scales. The purpose of this study was to measure TB stigma and identify factors associated with TB stigma among patients and healthy community members. METHODS: A cross-sectional study was performed in southern Thailand among two different groups of participants: 480 patients with TB and 300 healthy community members. Data were collected on socio-demographic characteristics, TB knowledge, and clinical factors. Scales measuring perceived TB stigma, experienced/felt TB stigma, and perceived AIDS stigma were administered to patients with TB. Community members responded to a community TB stigma and community AIDS stigma scale, which contained the same items as the perceived stigma scales given to patients. Stigma scores could range from zero to 30, 33, or 36 depending on the scale. Three separate multivariable linear regressions were performed among patients with TB (perceived and experience/felt stigma) and community members (community stigma) to determine which factors were associated with higher mean TB stigma scores. RESULTS: Only low level of education, belief that TB increases the chance of getting AIDS, and AIDS stigma were associated with higher TB stigma scores in all three analyses. Co-infection with HIV was associated with higher TB stigma among patients. All differences in mean stigma scores between index and referent levels
of each factor were less than two points, except for incorrectly believing that TB increases the chance of getting AIDS (mean difference of 2.16; 95% CI: 1.38, 2.94) and knowing someone who died from TB (mean difference of 2.59; 95% CI: 0.96, 4.22). CONCLUSION: These results suggest that approaches addressing the dual TB/HIV epidemic may be needed to combat TB stigma and that simply correcting misconceptions about TB may have limited effects.


OBJECTIVE: The BED assay was developed to estimate the proportion of recent HIV infections in a population. We used the BED assay as a proxy for acute infection to quantify the associated risk of mother-to-child-transmission (MTCT) during pregnancy and delivery. Design A total of 3773 HIV-1 sero-positive women were tested within 96 h of delivery using the BED assay, and CD4 cell count measurements were taken. Mothers were classified according to their likelihood of having recently seroconverted. METHODS: The risk of MTCT in utero and intra-partum was assessed comparing different groups defined by BED and CD4 cell count, adjusting for background factors using multinomial logistic models. RESULTS: Compared with women with BED > 0.8/CD4 > = 350 (typical of HIV-1 chronic patients) there was insufficient evidence to conclude that women presenting with BED < 0.8/CD4 > = 350 (typical of recent infections) were more likely to transmit in utero [adjusted odds ratio (aOR) = 1.37, 95% confidence interval (CI) 0.90-2.08, P = 0.14], whereas women with BED < 0.8/CD4 200-349 (possibly recently infected patients) had a 2.57 (95% CI 1.39-4.77, P-value < 0.01) odds of transmitting in utero. Women who had BED < 0.8/CD4 < 200 were most likely to transmit in utero (aOR 3.73, 95% CI 1.27-10.96, P = 0.02). BED and CD4 cell count were not predictive of intra-partum infections. CONCLUSIONS: These data provide evidence that in utero transmission of HIV might be higher among women who seroconvert during pregnancy.


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BACKGROUND: The practice of tattooing and piercing has expanded in western society. In order to verify young adults’ knowledge of the risk and practices related to body art, an investigation was conducted among freshmen of the University of Bari in the region of Apulia, Italy. METHODS: The study was carried out in the Academic Year 2009-2010 through an anonymous self-administered written questionnaire distributed to 1,656 freshmen enrolled in 17 Degree Courses. RESULTS: Of the 1,598 students included in the analysis, 78.3% believe it is risky to undergo piercing/tattoo practices. AIDS was indicated as a possible infection by 60.3% of freshmen, hepatitis C by 38.2%, tetanus by 34.3% and hepatitis B by 33.7% of the sample. 28.1% of those with body art, the decision to undergo body art was made autonomously in 57.9% of the participants. 56.3% of freshmen undergoing body art had taken less than a month to decide. With regard to the reasons that led the sample to undergo body art, 28.4% were unable to explain it, 23.8% answered to improve their aesthetic aspect, 18.4% to distinguish themselves from others, 12.3% for fashion; 17.1% for other reasons. 25.4% of the sample declared that they had a piercing (79.8% female vs 20.2% male; ratio M/F 1.4:0). The average age for a first piercing was 15.3 years (range 10-27; SD +/- 2.9). 9.6% of the sample declared that they have a tattoo (69.9% female vs 30.1% male; ratio M/F 1.2:3). The average age for a first tattoo was 17.5 years (range 10-26, SD +/- 2.4). CONCLUSIONS: Most of the freshmen knew about AIDS-related risks but not
other potential risks. Body art is fairly common among young adults (especially women). The decision is often not shared with the family and is undertaken mostly without a specific reason or for the improvement of aesthetic aspect. Information about freshmen’s knowledge, attitudes and practices could help in effective planning of health promotion strategies.


One of the many challenges hindering the global response to the human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) epidemic is the difficulty of collecting reliable information about the populations most at risk for the disease. Thus, the authors empirically assessed a promising new method for estimating the sizes of most at-risk populations: the network scale-up method. Using 4 different data sources, 2 of which were from other researchers, the authors produced 5 estimates of the number of heavy drug users in Curitiba, Brazil. The authors found that the network scale-up and generalized network scale-up estimators produced estimates 5-10 times higher than estimates made using standard methods (the multiplier method and the direct estimation method using data from 2004 and 2010). Given that equally plausible methods produced such a wide range of results, the authors recommend that additional studies be undertaken to compare estimates based on the scale-up method with those made using other methods. If scale-up-based methods routinely produce higher estimates, this would suggest that scale-up-based methods are inappropriate for populations most at risk of HIV/AIDS or that standard methods may tend to underestimate the sizes of these populations.


The article systematically reviews theory and existing empirical evidence on the health and welfare effects of integrating AIDS treatment with food assistance. While theoretical predictions point to possible improvements in health, consumption and ambiguous effects on labor supply, there are few empirical studies that used robust designs. Five empirical studies are reviewed and in two of them, food assistance improves nutritional status, especially when provided in the form of ready to use therapeutic feeding. However because of methodological concerns, the positive effects of food assistance on weight gain warrant cautious interpretation. One study found a positive association between food assistance and adherence. While no quantitative study evaluated welfare effects, respondents in a qualitative study self-reported the resumption of labor activities, increased dietary diversity and food consumption. There is still limited evidence on the role of duration of AIDS treatment and programmatic aspects like targeting, composition and duration of food assistance. The major conclusion of the paper is that there is still need for further research based on robust designs which investigates both health and household welfare effects.

BACKGROUND: There is limited information on the distribution of incubation periods of tuberculosis (TB). METHODS: In The Netherlands, patients whose Mycobacterium tuberculosis isolates have identical DNA fingerprints in the period 1993-2007 were interviewed to identify epidemiological links between cases. We determined the incubation period distribution in secondary cases. Survival analysis techniques were used to include secondary cases not yet symptomatic at diagnosis with weighting to adjust for lower capture probabilities of couples with longer time intervals between their diagnoses. In order to deal with missing data, we used multiple imputations. RESULTS: We identified 1095 epidemiologically linked secondary cases, attributed to 688 source cases with pulmonary TB. Of those developing disease within 15 years, the Kaplan-Meier probability to fall ill within 1 year was 45%, within 2 years 62% and within 5 years 83%. The incubation time was shorter in secondary cases who were men, young, those with extra-pulmonary TB and those not reporting previous TB or previous preventive therapy.

CONCLUSIONS: Molecular epidemiological analysis has allowed a more precise description of the incubation period of TB than was possible in previous studies, including the identification of risk factors for shorter incubation periods.
household, creche/school, and work locations, respectively. Indoor contact time was long in households and short during transport. High numbers of indoor contacts and intergenerational mixing in households and transport may contribute to exceptionally high rates of tuberculosis transmission reported in the community.

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ABSTRACT: BACKGROUND: Tuberculosis (TB) remains one of the most important infectious diseases worldwide. A comprehensive approach towards disease control that addresses social factors including stigma is now advocated. Patients with TB report fears of isolation and rejection that may lead to delays in seeking care and could affect treatment adherence. Qualitative studies have identified socio-demographic, TB knowledge, and clinical determinants of TB stigma, but only one prior study has quantified these associations using formally developed and validated stigma scales. The purpose of this study was to measure TB stigma and identify factors associated with TB stigma among patients and healthy community members. METHODS: A cross-sectional study was performed in southern Thailand among two different groups of participants: 480 patients with TB and 300 healthy community members. Data were collected on socio-demographic characteristics, TB knowledge, and clinical factors. Scales measuring perceived TB stigma, experienced/felt TB stigma, and perceived AIDS stigma were administered to patients with TB. Community members responded to a community TB stigma and community AIDS stigma scale, which contained the same items as the perceived stigma scales given to patients. Stigma scores could range from zero to 30, 33, or 36 depending on the scale. Three separate multivariable linear regressions were performed among patients with TB (perceived and experience/felt stigma) and community members (community stigma) to determine which factors were associated with higher mean TB stigma scores. RESULTS: Only low level of education, belief that TB increases the chance of getting AIDS, and AIDS stigma were associated with higher TB stigma scores in all three analyses. Co-infection with HIV was associated with higher TB stigma among patients. All differences in mean stigma scores between index and referent levels of each factor were less than two points, except for incorrectly believing that TB increases the chance of getting AIDS (mean difference of 2.16; 95% CI: 1.38, 2.94) and knowing someone who died from TB (mean difference of 2.59; 95% CI: 0.96, 4.22). CONCLUSION: These results suggest that approaches addressing the dual TB/HIV epidemic may be needed to combat TB stigma and that simply correcting misconceptions about TB may have limited effects.


(9) MOSZYNSKI P. TB incidence in UK decreases for first time in two decades. BMJ. 2011, vol. 343, p.d8033


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BACKGROUND: The tuberculin skin test (TST) is still the standard test for detecting latent infection by M tuberculosis (LTBI). Given that the Brazilian Health Ministry recommends that the treatment of latent tuberculosis (LTBI) should be guided by the TST results, the present study sets
out to describe the coverage of administering the TST in people living with HIV at two referral health centers in the city of Recife, where TST is offered to all patients. In addition, factors associated with the non-application of the test and with positive TST results were also analyzed.

METHODS: A cross-sectional study was carried out with HIV patients, aged 18 years or over, attending outpatient clinics at the Correia Piccano Hospital/SES/PE and the Oswaldo Cruz/UPE University Hospital, who had been recommended to take the TST, in the period between November 2007 and February 2010. Univariate and multivariate logistic regression analyses were carried out to establish associations between the dependent variable - taking the TST (yes/no), at a first stage analysis, and the independent variables, followed by a second stage analysis considering a positive TST as the dependent variable. The odds ratio was calculated as the measure of association and the confidence interval (CI) at 95% as the measure of accuracy of the estimate.

RESULTS: Of the 2,290 patients recruited, 1,087 (47.5%) took the TST. Of the 1,087 patients who took the tuberculin skin test, the prevalence of TST $\geq 5$ mm was 21.6% among patients with CD4 $\geq 200$ and 9.49% among those with CD4 $< 200$ ($p = 0.002$). The patients most likely not to take the test were: men, people aged under 39 years, people with low educational levels and crack users. The risk for not taking the TST was statistically different for health service. Patients who presented better immunity (CD4 $\geq 200$) were more than two and a half times more likely to test positive that those with higher levels of immunodeficiency (CD4 $< 200$).

CONCLUSIONS: Considering that the TST is recommended by the Brazilian health authorities, coverage for taking the test was very low. The most serious implication of this is that LTBI treatment was not carried out for the unidentified TST-positive patients, who may consequently go on to develop TB and eventually die.
BACKGROUND: Treatment of latent Mycobacterium tuberculosis infection is an essential component of tuberculosis control and elimination. The current standard regimen of isoniazid for 9 months is efficacious but is limited by toxicity and low rates of treatment completion. METHODS: We conducted an open-label, randomized noninferiority trial comparing 3 months of directly observed once-weekly therapy with rifapentine (900 mg) plus isoniazid (900 mg) (combination-therapy group) with 9 months of self-administered daily isoniazid (300 mg) (isoniazid-only group) in subjects at high risk for tuberculosis. Subjects were enrolled from the United States, Canada, Brazil, and Spain and followed for 33 months. The primary end point was confirmed tuberculosis, and the noninferiority margin was 0.75%. RESULTS: In the modified intention-to-treat analysis, tuberculosis developed in 7 of 3986 subjects in the combination-therapy group (cumulative rate, 0.19%) and in 15 of 3745 subjects in the isoniazid-only group (cumulative rate, 0.43%), for a difference of 0.24 percentage points. Rates of treatment completion were 82.1% in the combination-therapy group and 69.0% in the isoniazid-only group (P<0.001). Rates of permanent drug discontinuation owing to an adverse event were 4.9% in the combination-therapy group and 3.7% in the isoniazid-only group (P=0.009). Rates of investigator-assessed drug-related hepatotoxicity were 0.4% and 2.7%, respectively (P<0.001). CONCLUSIONS: The use of rifapentine plus isoniazid for 3 months was as effective as 9 months of isoniazid alone in preventing tuberculosis and had a higher treatment-completion rate. Long-term safety monitoring will be important. (Funded by the Centers for Disease Control and Prevention; PREVENT TB ClinicalTrials.gov number, NCT00023452.)