Titles


8: Harrison MS, Coyne T, Lee AJ, Leonard D, Lowson S, Groos A, Ashton BA.
The increasing cost of the basic foods required to promote health in Queensland.
PMID: 17229024 [PubMed - indexed for MEDLINE]

9: Webb KL, Leeder SR.
New Year's resolution: let's get rid of excessive food prices in remote Australia.
PMID: 17229023 [PubMed - indexed for MEDLINE]

10: Acharya S.
Specific caries index: A new system for describing untreated dental caries experience in developing countries.
PMID: 17225827 [PubMed - indexed for MEDLINE]

11: Habbari K, Tifnouti A, Bitton G, Mandil A.
Raw wastewater agricultural re-use and risk of protozoal infection in Beni-Mellal, Morocco.
PMID: 17219875 [PubMed - indexed for MEDLINE]

12: Bassiouny HK, Awad OM, Ahmed MH.
Bionomics of the anopheline vectors in an endemic area in Fayoum Governorate, Egypt.
PMID: 17219869 [PubMed - indexed for MEDLINE]

13: Colosio C, Ariano E, Patil AV.
PMID: 17219774 [PubMed - indexed for MEDLINE]

Impact of National Schistosomiasis Control Program in Kafr El-Sheikh governorate, Nile Delta, Egypt: an independent evaluation.
PMID: 17217033 [PubMed - indexed for MEDLINE]
15: Farghaly AG, Mansour GA, Mahdy NH, Yousri A. 
Hepatitis B and C virus infections among patients with gingivitis and adult periodontitis: seroprevalence and public health importance. 
PMID: 17217032 [PubMed - indexed for MEDLINE]

Epidemiological study of the claimed zinc phosphide intoxication in Kom Ombo district April 1996. 
PMID: 17216958 [PubMed - indexed for MEDLINE]

17: Bassiouny HK, Beljaev AE, Awad OM, Ahmed MH. 
Parasitological profile of the surveyed population for malaria in an endemic area in Faiyoum Governorate, Egypt. 
PMID: 17216951 [PubMed - indexed for MEDLINE]

18: Zimmerman DL, Fang X, Mazumdar S, Rushton G. 
Modeling the probability distribution of positional errors incurred by residential address geocoding. 
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20: Hubbs-Tait L, Kennedy TS, Droke EA, Belanger DM, Parker JR. 
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PMID: 17197281 [PubMed - indexed for MEDLINE]

21: Arredondo EM. 
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35: Naunton M, Peterson G, Jones G.
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fractures.


50: Hajat S, Kovats RS, Lachowycz K.
Heat-related and cold-related deaths in England and Wales: who is at risk?
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51: Maher L, Jalaludin B, Chant KG, Jayasuriya R, Sladden T, Kaldor JM, Sargent PL.
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PMID: 16956727 [PubMed - indexed for MEDLINE]

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Hospitalizations of pregnant HIV-infected women in the USA prior to and during the era of HAART, 1994-2003.
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55: Mohammed H, Kissinger P.
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56: Reif S, Whetten K, Ostermann J, Raper JL.
Characteristics of HIV-infected adults in the Deep South and their utilization of mental health services: A rural vs. urban comparison.
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57: Chakraborty I, Chatterjee S, Bhadra D, Mukhopadhyaya BB, Dasgupta A, Purkait B.
Iodine deficiency disorders among the pregnant women in a rural hospital of West Bengal.
58: Belgnaoui S, Belahsen R.
Nutrient intake and food consumption among pregnant women from an agricultural region of Morocco.
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59: Kinabo J, Mnkeni AP, Nyaruhucha CN, Msuya J, Haug A, Ishengoma J.
Feeding frequency and nutrient content of foods commonly consumed in the Iringa and Morogoro regions in Tanzania.
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60: Maas J, Verheij RA, Groenewegen PP, de Vries S, Spreeuwenberg P.
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61: Pongou R, Salomon JA, Ezzati M.
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64: El-Hakim MA, El-Sahn A.
Association of parasites and diarrhoea among children less than five years of age in a rural area in Egypt.


Abstracts

Infection by trypanosomes in marsupials and rodents associated with human dwellings in Ecuador.

Pinto CM, Ocana-Mayorga S, Lascano MS, Grijalva MJ.

Laboratorio de Investigacion en Enfermedades Infecciosas, Escuela de Ciencias Biologicas, Pontificia Universidad Catolica del Ecuador, Quito, Ecuador.

Small mammals trapped in domestic and peridomestic environments of rural Ecuador were screened for trypanosome infection by direct microscopy and hemoculture. Identification of species of trypanosomes was then performed by morphological characteristics and by polymerase chain reaction (PCR) assays. Of 194 animals collected, 15 were positive for infection (7.73%). Eight (4.12%) were infected with Trypanosoma cruzi (1 of 33 Didelphis marsupialis; 7 of 61 Rattus rattus). Eleven R. rattus (18.03%) harbored T. lewisi, 5 of which presented mixed infections with T. cruzi. Additionally, 1 of 3 Oryzomys xanthaeolus was infected with T. rangeli. No trypanosome infection was detected in Philander opossum (n = 1), Mus musculus (n = 79), Rattus norvegicus (n = 8), Akodon orophilus (n = 4), Sigmodon peruanus (n = 3), or Proechimys decumanus (n = 2). Many of the isolates
belong to T. cruzi, the causative agent of Chagas disease, and R. rattus had the highest prevalence. Because of its abundance in the study areas, this species is considered an important reservoir for Chagas disease. This is the first report of T. lewisi and T. rangeli in Ecuador. This study is also the first to describe natural mixed infections of T. cruzi-T. lewisi.

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 17304802 [PubMed - indexed for MEDLINE]


Seroprevalence of hepatitis E virus infection, rural southern People's Republic of China.

Li RC, Ge SX, Li YP, Zheng YJ, Nong Y, Guo QS, Zhang J, Ng MH, Xia NS.

Guangxi Center for Disease Control and Prevention, Nanning, People's Republic of China.

Genotype 4 hepatitis E virus (HEV) is the dominant cause of hepatitis E in the People's Republic of China; swine are the principal reservoir. Our study was conducted in 8 rural communities of southern China, where families keep pigs near their homes. Phylogenetic analysis showed that 23 of 24 concurrent virus isolates from this region are genotype 4 strains. Among the study populations, immunoglobulin G anti-HEV seroprevalence accumulated with age at approximately equal to 1% per year for persons < or =60 years of age. After age 30 years, seroprevalence increased at higher rates for male than for female study participants. The overall seroprevalence was 43% (range 25%-66%) among the communities. Infection rates were higher for participants between 25 and 29 years of age. The results suggest that HEV infection probably has been endemic in southern China for at least 60 years, with swine being the principal reservoir of human HEV infection in recent years.

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 17283617 [PubMed - indexed for MEDLINE]
Prevalence of leucorrhoea among married women in the age group of 15-44 years in a rural community.

Jayasree TM, Anandi C, Ethirajan N, Felix AJ.

Department of Community Medicine, Rajah Muthiah Medical College.

PMID: 17278663 [PubMed - indexed for MEDLINE]

In the world, 24% of the burden of disease is attributable to environmental exposures: this proportion is up to 36% for 0-14 year old children. This notable impact on health is due partly to old environmental problems: 2.6 billion people, more than 40% of the world population, do not have access to proper sanitation; about 1.1 billion people, mostly living in rural areas (84%), do not have access to sources of safe drinking water; 1.8 million people per year die of diarrhea out of which 1.6 million are children under 5. At the same time, in the developed world and in countries with economies in rapid transition, there is wide concern and growing scientific evidence on the effects of chemical environmental pollution and of climate change on health. In order to tackle effectively these issues, public health policies, addressing traditional problems with well known approaches as well as multisectoral strategies involving the society at large, are necessary.

PMID: 17263040 [PubMed - indexed for MEDLINE]

The impact of a hybrid social marketing intervention on inequities in access,
ownership and use of insecticide-treated nets.

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BACKGROUND: An ITN intervention was initiated in three predominantly rural districts of Eastern Province, Zambia, that lacked commercial distribution and communication infrastructures. Social marketing techniques were used for product and message development. Public sector clinics and village-based volunteers promoted and distributed subsidized ITNs priced at 2.5 dollars per net. A study was conducted to assess the effects of the intervention on inequities in knowledge, access, ownership and use of ITNs. METHODS: A post-test only quasi-experimental study design was used to compare intervention and comparison districts. A total of 2,986 respondents were interviewed. Survey respondents were grouped into four socio-economic (SES) categories: low, medium-low, medium and high. Knowledge, access, ownership and use indicators are compared. Concentration index scores are calculated. Interactions between intervention status and SES help determine how different SES groups benefited from the intervention. RESULTS: Although overall use of nets remained relatively low, post-test data show that knowledge, access, ownership and use of mosquito nets was higher in intervention districts. A decline in SES inequity in access to nets occurred in intervention districts, resulting from a disproportionately greater increase in access among the low SES group. Declines in SES inequities in net ownership and use of nets were associated with the intervention. The largest increases in net ownership and use occurred among medium and high SES categories. CONCLUSION: Increasing access to nets among the poorest respondents in rural areas may not lead to increases in net use unless the price of nets is no longer a barrier to their purchase.

Publication Types:
  Evaluation Studies
  Multicenter Study

PMID: 17261185 [PubMed - indexed for MEDLINE]

Comment on:

Type 2 diabetes and rural India.

Abdul FB.

Publication Types:
  Comment
  Letter

PMID: 17258664 [PubMed - indexed for MEDLINE]


Community uptake of safe storage boxes to reduce self-poisoning from pesticides in rural Sri Lanka.


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BACKGROUND: Acute poisoning by agricultural pesticides is a well established global public health problem. Keeping pesticides under safe storage is now promoted as a potential way to reduce the number of severe poisoning cases. However, there have been no published studies documenting the feasibility of such an approach. Therefore, the objective of the study presented here was to determine community perceptions and use of in-house safe storage boxes for pesticides in rural Sri Lanka. METHODS: Boxes with a lock, to be used for the in-house safe storage of pesticides, were distributed to 200 randomly selected farming households in two agricultural communities. A baseline survey determined pesticide storage practices and household characteristics prior to distribution. The selected households were encouraged to make use of the box at community meetings and during a single visit to each household one month after distribution. No further encouragement was offered. A follow-up survey assessed storage practices seven months into the project. RESULTS: Following the distribution of the boxes the community identified a number of benefits
including the protection of pesticide containers against exposure from the rain and sun and a reduced risk of theft. Data were analysed for 172 households that reported agricultural use of pesticides at follow-up. Of these, 141 (82%) kept pesticides in the house under lock against 3 (2%) at baseline. As expected, the distribution of boxes significantly reduced the number of households storing pesticides in the field, from 79 (46%) at baseline to 4 (2%) at follow-up. There was a significant increase in the number of households keeping pesticides safe from children between baseline (64%) and seven months after the distribution of boxes (89%). The same was true for adults although less pronounced with 51% at baseline and 66% at follow-up. CONCLUSION: The farming community appreciated the storage boxes and made storage of pesticides safer, especially for children. It seems that additional, intensive promotion is needed to ensure that pesticide boxes are locked. The introduction of in-house safe storage boxes resulted in a shift of storage into the farmer's home and away from the field and this may increase the domestic risk of impulsive self-poisoning episodes. This increased risk needs attention in future safe storage promotion projects.

The increasing cost of the basic foods required to promote health in Queensland.

Harrison MS, Coyne T, Lee AJ, Leonard D, Lowson S, Groos A, Ashton BA.

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OBJECTIVE: To assess changes in the cost and availability of a standard basket
of healthy food items (the Healthy Food Access Basket [HFAB]) in Queensland over time. DESIGN AND PARTICIPANTS: A series of four cross-sectional surveys (in 1998, 2000, 2001 and 2004) describing the cost and availability of foods in the HFAB over time. In the latest survey, 97 Queensland food stores across the five Australian Bureau of Statistics remoteness categories were compared. MAIN OUTCOME MEASURES: Cost comparisons for HFAB items by remoteness category for the 97 stores surveyed in 2004; changes in cost and availability of foods in the 81 stores surveyed since 2000; comparisons of food prices in the 56 stores surveyed in 1998, 2000, 2001 and 2004. RESULTS: In 2004, the Queensland mean cost of the HFAB was $395.28 a fortnight. The cost of the HFAB was 29.6% ($113.89) higher in "very remote" areas than in "major cities" (P < 0.001). Between 2001 and 2004, the Queensland mean cost of the HFAB increased by 14.0% ($48.45), while in very remote areas the cost increased by 18.0% ($76.93) (P < 0.001). Since 2000, the annualised per cent increase in cost of the HFAB has been higher than the increase in Consumer Price Index for food in Brisbane. The cost of healthy foods has risen more than the cost of some less nutritious foods, so that the latter are now relatively more affordable. CONCLUSIONS: Consumers, particularly those in very remote locations, need to pay substantially more for basic healthy foods than they did a few years ago. Higher prices are likely to be a barrier to good health among people of low socioeconomic status and other vulnerable groups. Interventions to make basic healthy food affordable and accessible to all would help reduce the high burden of chronic disease.

Publication Types:
Research Support, Non-U.S. Gov’t

PMID: 17229024 [PubMed - indexed for MEDLINE]


Comment on:
New Year's resolution: let's get rid of excessive food prices in remote Australia.

Webb KL, Leeder SR.

Publication Types:
  Comment
  Editorial

PMID: 17229023 [PubMed - indexed for MEDLINE]


Specific caries index: A new system for describing untreated dental caries experience in developing countries.

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OBJECTIVES: To develop a reproducible surface-specific caries index that provided qualitative and quantitative information about untreated dental caries, that could be used in conjunction with the DMFS index and would provide information on not only the caries prevalence but also the location and type of caries lesion in an individual based on clinical examination. METHODS: Untreated carious lesions were divided into six types based on the location of the lesions. 339 rural school children in the age group of 12-15 years were examined for dental caries using both the DMFS index and the Specific Caries Index. RESULTS: Type 1 and 2 were found to be the most common type of caries lesions. The reproducibility of the Specific Caries Index was also found to be good. CONCLUSIONS: Encouraging indications about the validity and reproducibility of this new caries index was found, suggesting the need for further studies to test its applicability in larger and different populations.

PMID: 17225827 [PubMed - indexed for MEDLINE]


Raw wastewater agricultural re-use and risk of protozoal infection in Beni-Mellal, Morocco.
This study was carried out to determine the potential risk of protozoal infection associated with raw wastewater use for agricultural purposes, among children of Beni-Mellal, Morocco. In a randomly-selected sample of 1343 children, 740 from 5 regions which use raw wastewater for agriculture (exposed), while 603 were from 4 control regions that do not practice wastewater irrigation (unexposed). A questionnaire-interview with children and parents was used to collect data on demographic, hygienic, and risky water contact risk factors. One or more protozoal infection was identified among 276 (37.2%) of children living in the wastewater re-use regions, versus only among 22 (3.6%) living in control regions. The overall prevalence of 40.1% was observed among boys, and 33.3% among girls residing in exposed areas. The two identified protozoa were Entamoeba histolytica and Giardia intestinalis, which infected 34.3% and 5.1% in the exposed population compared to only 3.3% and 0.3% in the control population, respectively. We also noted that the G. intestinalis prevalence was more than 40% among the children under 9 years, but less than 17% for those who were more than 12 years. Also, a significant excess of protozoal infection was observed among children who had risky contact with agricultural lands (p<0.001).

In conclusion, raw wastewater use in Beni-Mellal can lead to a high risk of protozoal infections. Adequate treatment of wastewater prior to re-use, as well as public health education are highly recommended.

PMID: 17219875 [PubMed - indexed for MEDLINE]

Bionomics of the anopheline vectors in an endemic area in Fayoum Governorate, Egypt.

Bassiouny HK, Awad OM, Ahmed MH.

Tropical Health Department, High Institute of Public Health, Alexandria University, Egypt.
A one-year longitudinal entomological study was carried out at Kafr Fazara village, Sinnuris District, Faiyoum Governorate from January to December 1996. The results revealed that three species of anophelines were found. A. sergenti was the most prevalent species followed by A. multicolor and the least prevalent one was A. pharoensis. The influence of climatic conditions on anopheline abundance was also studied. The mean monthly temperature has a significant effect on larvae abundance, while no significant correlation was found concerning relative humidity or wind speed for both larvae and adult anophelines. The transmission season of P. falciparum in Faiyoum Governorate extended to more than eight months a year which could explain the persistence of malaria up there. The bionomics of the recorded vectors were discussed.

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 17219869 [PubMed - indexed for MEDLINE]


Colosio C, Ariano E, Patil AV.

Publication Types:
News

PMID: 17219774 [PubMed - indexed for MEDLINE]


Impact of National Schistosomiasis Control Program in Kafr El-Sheikh governorate, Nile Delta, Egypt: an independent evaluation.


Tropical Health Department, High Institute of Public Health, Alexandria University, Egypt.

A longitudinal study has been conducted (1991-1997) to evaluate the impact of
repeated selective chemotherapy on human transmission indices of Schistosoma mansoni infection. The study population included 8370 individuals inhabiting four villages and their satellites and representing high and low S. mansoni endemicity communities in Kafr El-Sheikh governorate. A parasitological survey was conducted for three successive years (1991-1992 and 1993). Each time infected received praziquantel (PZQ) chemotherapy. In 1997, a fourth parasitological survey was done. During the period from 1994-1996 only routine diagnosis and treatment of schistosomiasis offered by the Ministry of Health and Population (MOHP) was going on. Study results revealed a decrease in S. mansoni prevalence and intensity of infection in the first three years. The drop was marked after the first year. In 1997, after the cessation of active case finding and treatment by the project team, an upward trend was observed for both prevalence and geometric mean egg count (GMEC) especially for the high prevalence villages. However, all indices were kept at significant low levels as compared to base-line values in 1991.

Publication Types:
Evaluation Studies

PMID: 17217033 [PubMed - indexed for MEDLINE]


Hepatitis B and C virus infections among patients with gingivitis and adult periodontitis: seroprevalence and public health importance.

Farghaly AG, Mansour GA, Mahdy NH, Yousri A.

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The aim of the present case control study was to identify seroprevalence of hepatitis B and C virus (HBV and HCV) infections among one hundred cases with periodontal disease (71% gingivitis and 29% adult periodontitis) and one hundred controls with healthy gingiva matched for age and sex. Moreover, it aimed to detect hepatitis markers in saliva samples corresponding to the positive sera. Different risk factors associated with hepatitis infection and detectability rate of hepatitis markers were also studied. METHODOLOGY: enzyme linked immunosorbent assay (ELISA) technique was used to detect the presence of
hepatitis B surface antigen (HBsAg), antibody to hepatitis B core antigen (anti HBc), e antigen (eAg) and antibody to hepatitis C virus (anti HCV) both in serum and saliva samples. HCV RNA was detected by polymerase chain reaction (PCR) technique. Oral examination was performed for assessment of simplified Oral Hygiene Index (OHI-S), Papillary Bleeding Index (PBI), probing pocket depth and loss of fibre attachment. RESULTS: cases with periodontal disease showed higher percentages of hepatitis exposure (hepex; anti HCV and/or anti HBc) and significantly higher anti HCV seropositivity than the controls (26% and 13% versus 22% and 8%, respectively). No difference in HBsAg carrier rate nor in anti HBc seropositivity was elicited. Furthermore, cases with periodontal disease showed higher detectability rate of HBsAg, anti HBc, anti HCV or both anti HCV and/or anti HBc in whole unstimulated saliva than the controls (100% vs 66.7%, 50% vs 23.5%, 23.1% vs 0.0% and 42.3% vs 18.2%, respectively). Stepwise logistic regression delineated two significant factors associated with the risk of hepatitis exposure, the first predictor was the rural residence and the second one was the history of blood transfusion (OR=3.10, 2.94, respectively). Periodontal disease, severity of bleeding and bad oral hygiene were associated with the risk of hepatitis infection and with the detectability of hepatitis markers in the whole saliva.

PMID: 17217032 [PubMed - indexed for MEDLINE]


Epidemiological study of the claimed zinc phosphide intoxication in Kom Ombo district April 1996.


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INTRODUCTION: In April 1996, in Aswan Governorate, Egypt, an outbreak of vomiting without diarrhea, abdominal and leg pain was reported. METHODS: A case-control study was conducted to determine the cause of the outbreak. 25 cases who had vomiting without diarrhea, abdominal and leg pain. Controls were randomly chosen from adjacent houses to cases and another village. RESULTS: No
occupational exposure was associated with the disease, 84% of cases lived in households where chemical rodenticide had been used for rat infestations compared to 22% of controls. Laboratory analysis and field investigation identified zinc phosphide intoxication as the probable cause of this outbreak.

PMID: 17216958 [PubMed - indexed for MEDLINE]


Parasitological profile of the surveyed population for malaria in an endemic area in Faiyoum Governorate, Egypt.

Bassiouny HK, Beljaev AE, Awad OM, Ahmed MH.

Tropical Health Department, High Institute of Public Health, Alexandria University, Egypt.

Egypt represents the only focus in the Mediterranean region where Plasmodium falciparum transmission still occurs. A longitudinal parasitological study has been implemented (September 1995 to December 1996) in Faiyoum, Egypt. A total of 9065 blood slides for malaria parasites were taken from all people in the study area as mass blood examination (MBE); those attending the malaria unit as passive case detection (PCD) as well as from neighborhood of the detected cases (NOD). They were stained by Giemsa stain and examined under standard conditions for positivity, parasite species and parasite density. Our results show that MBE detected 61.5% of malaria cases while 23.1% and 15.4% of the confirmed cases were detected through PCD and NOD respectively. The overall parasite rate was 5.7/1000 examined population. P. falciparum was the most predominant species (96.1%), followed by P. vivax (3.9%). The epidemiological factors causing the persistence of malaria transmission in the study area are discussed.

Publication Types:
   Research Support, Non-U.S. Gov't

PMID: 17216951 [PubMed - indexed for MEDLINE]


Modeling the probability distribution of positional errors incurred by
residential address geocoding.

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BACKGROUND: The assignment of a point-level geocode to subjects' residences is an important data assimilation component of many geographic public health studies. Often, these assignments are made by a method known as automated geocoding, which attempts to match each subject's address to an address-ranged street segment georeferenced within a streetline database and then interpolate the position of the address along that segment. Unfortunately, this process results in positional errors. Our study sought to model the probability distribution of positional errors associated with automated geocoding and E911 geocoding. RESULTS: Positional errors were determined for 1423 rural addresses in Carroll County, Iowa as the vector difference between each 100%-matched automated geocode and its true location as determined by orthophoto and parcel information. Errors were also determined for 1449 60%-matched geocodes and 2354 E911 geocodes. Huge (> 15 km) outliers occurred among the 60%-matched geocoding errors; outliers occurred for the other two types of geocoding errors also but were much smaller. E911 geocoding was more accurate (median error length = 44 m) than 100%-matched automated geocoding (median error length = 168 m). The empirical distributions of positional errors associated with 100%-matched automated geocoding and E911 geocoding exhibited a distinctive Greek-cross shape and had many other interesting features that were not capable of being fitted adequately by a single bivariate normal or t distribution. However, mixtures of t distributions with two or three components fit the errors very well. CONCLUSION: Mixtures of bivariate t distributions with few components appear to be flexible enough to fit many positional error datasets associated with geocoding, yet parsimonious enough to be feasible for nascent applications of measurement-error methodology to spatial epidemiology.

Publication Types:

Diouf A, Garcon G, Diop Y, Ndiaye B, Thiaw C, Fall M, Kane-Barry O, Ba D, Haguenoer JM, Shirali P.

Laboratoire de Chimie Analytique et Toxicologie, Faculte de Medecine et de Pharmacie, UCAD, Dakar, Senegal.

Leaded-gasoline is probably the primary source of lead (Pb) exposure in Dakar (Senegal). The present cross-sectional study was undertaken to investigate the levels of Pb in Senegalese children and to present helpful data on the relationship between Pb levels and changes in biological markers of heme biosynthesis and oxidative stress. A total of 330 children, living since birth either in rural or urban areas (ie, Khombole (n = 162) and Dakar (n = 168), respectively) were included. During this cross-sectional study, the mean blood (B)-Pb level in all children was 7.32 +/- 5.33 microg/dL, and was influenced by the area of residence and gender. In rural children, 27 subjects (16.7%), 18 boys (19.6%) and nine girls (12.9%), had a B-Pb level > 10 microg Pb/dL, whereas 99 urban children (58.9%), respectively, 66 boys (71.8%) and 33 girls (43.4%), had alarmingly high B-Pb levels. Accordingly, urine delta-aminolevulinic acid levels were higher in children living in the urban area than in the rural areas (P < 0.001), and closely correlated with the B-Pb levels (P < 0.01). Moreover, glutathione peroxidase (GPx) activity, selenium (Se) level, glutathione reductase (GR) activity, and glutathione status were significantly influenced by area of residence and/or by gender. GPx activity and Se level were not only negatively correlated with B-Pb levels, but also positively correlated together (P < 0.01). Taken together, the present results allow us to conclude that urban children have higher B-Pb levels than rural children, and that of these children, boys have higher B-Pb levels than girls, leading thereby to alterations of heme biosynthesis and pro-oxidant/antioxidant balance. We also suggest that exposure to Pb and the Pb-induced adverse effects merits attention and that the development of preventive actions are of increasing importance in Senegal.
The objective of this study was to conduct a preliminary investigation of lead, zinc, and iron levels in relation to child cognition and behavior in a small sample of Head Start children. The design was cross-sectional and correlational.

Participants were 42 3- to 5-year-old children attending rural Head Start centers. Nonfasting blood samples of whole blood lead, plasma zinc, and ferritin were collected. Teachers rated children's behavior on the California Preschool Social Competency Scale, Howes' Sociability subscale, and the Preschool Behavior Questionnaire. Children were tested individually with the McCarthy Scales of Children's Abilities. Hierarchical regression analyses revealed that zinc and ferritin jointly explained 25% of the variance in McCarthy Scales of Children's Abilities verbal scores. Lead levels explained 25% of the variance in teacher ratings of girls' sociability and 20% of the variance in teacher ratings of girls' classroom competence. Zinc levels explained 39% of the variance in teacher ratings of boys' anxiety. Univariate analysis of variance revealed that the four children low in zinc and iron had significantly higher blood lead (median=0.23 micromol/L [4.73 microg/dL]) than the 31 children sufficient in zinc or iron (median=0.07 micromol/L [1.54 microg/dL]) or the 7 children sufficient in both (median=0.12 micromol/L [2.52 microg/dL]), suggesting an interaction among the three minerals. Within this small low-income sample, the results imply both separate and interacting effects of iron, zinc, and lead. They underscore the importance of studying these three minerals in larger samples of low-income preschool children to make more definitive conclusions.
Predictors of obesity among children living in Mexico City.

Arredondo EM.

Publication Types:
   Editorial

Arsenic exposure in pregnancy: a population-based study in Matlab, Bangladesh.


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This study assessed the exposure of pregnant women to arsenic in Matlab, Bangladesh, an area with highly-elevated concentrations of arsenic in tubewells, by measuring concentrations of arsenic in urine. In a defined administrative area, all new pregnancies were identified by urine test in gestational week 6-8, and women were asked to participate in the assessment of arsenic exposure. Urine for analysis of arsenic was collected immediately and in gestational week 30. In total, 3,426 pregnant women provided urine samples during January 2002-March 2003. There was a considerable variation in urinary concentrations of arsenic (total range 1-1,470 microg/L, adjusted to specific gravity 1.012 g/mL), with an overall median concentration of 80 microg/L (25th and 75th percentiles were 37 and 208 microg/L respectively). Similar concentrations were found in gestational week 30, indicating no trend of decreasing exposure, despite the initiation of mitigation activities in the area. Arsenic exposure was negatively associated with socioeconomic classes and achieved educational level. There were marked
geographical variations in exposure. The results emphasize the urgent need for efficient mitigation activities and investigations of arsenic-related reproductive effects.

Publication Types:
Research Support, Non-U.S. Gov’t

PMID: 17195565 [PubMed - indexed for MEDLINE]


Prevalence of arsenic-related skin lesions in 53 widely-scattered villages of Bangladesh: an ecological survey.

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A survey was carried out to provide a representative assessment of prevalence and risk of arsenic-related skin lesions in relation to geographical distribution of arsenic in wells of rural Bangladesh as a necessary background for research into effects in pregnancy and cancer risks. A systematic random sample of 53 villages in four divisions of Bangladesh served by Gonoshasthaya Kendra was selected, and all women aged 18 years or more (n=16,740) were listed. Trained paramedics recorded the presence of skin thickening and nodules on the palms and soles, together with information on tubewell use. The prevalence was related to the mean concentration of arsenic for the district as indicated by data from the British Geological Survey and to the date the first well in the village was installed. Overall, the observed prevalence was 176 cases (1.3%) in 13,705 women examined, varying from 0% in 26 villages to 23% in one; lesions were observed more frequently on hands than on feet. The estimate doubled with concentrations of arsenic from 11 to < or =50 microg/L and increased more than 20 times at >50 microg/L. In the absence of further information, priority for
control measures should be directed at areas where the average concentrations of arsenic are above 50 microg/L, especially in villages where skin lesions have been identified.

Publication Types:
  Research Support, Non-U.S. Gov’t

PMID: 17195564 [PubMed - indexed for MEDLINE]


Levels of arsenic in drinking-water and cutaneous lesions in Inner Mongolia.

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The most common health effects from drinking-water containing dissolved arsenic are skin abnormalities and lesions that are typically diagnosed as keratosis and pigment disorder. It was previously reported that the prevalence of cutaneous lesions was about 44% in arsenic-affected villages. However, there has been little research on the relationship between levels of arsenic in drinking-water and cutaneous lesions in Inner Mongolia. One study examined the association between the prevalence of keratosis and levels of arsenic exposure and the relationship between pigment disorder and levels of arsenic exposure among villagers aged 18 years or older in the arsenic-affected village of Hetao Plain in Inner Mongolia, PR China. The study included 227 participants who were affected by cutaneous lesions and 221 participants who were not affected by cutaneous lesions diagnosed in 1996 and 1998. Well-water drunk by the participants was collected to analyze arsenic content. Adjusting for age, sex, and smoking, logistic regression was applied to calculate the risks that arsenic in drinking-water will lead to cutaneous lesions. The results from the logistic regression showed that, with the increase of arsenic concentration in water, the risk of pigment disorder also increased (odds ratio [OR]=5.25, 95% confidence interval [CI] 1.32-83.24 for 50-199 microg/L; OR=10.97, 95% CI 1.50-79.95 for 200-499 [microg/L; OR=10.00, 95% CI 1.39-71.77 for ≥ 500 microg/L (p=0.000), but the association between risk of keratosis and levels of arsenic was not significant (p=0.346). The findings suggest that keratosis is an early
feature of arsenic poisoning, and the development of pigment disorder depends on higher doses of arsenic intake rather than keratosis. Further studies are needed to confirm that cutaneous lesions and other adverse health effects occur at low levels of arsenic exposure.

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 17195562 [PubMed - indexed for MEDLINE]


Association of arsenic-contaminated drinking-water with prevalence of skin cancer in Wisconsin's Fox River Valley.

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During July 2000-January 2002, the Wisconsin Division of Public Health conducted a study in 19 rural townships. A high percentage of private drinking-water wells in these townships contained traces of arsenic. Residents were asked to collect well-water samples and complete a questionnaire regarding residential history, consumption of drinking-water, and family health. In total, 2,233 household wells were tested, and 6,669 residents, aged less than one year to 100 years, provided information on water consumption and health. The well-water arsenic levels ranged from less than 1.0 to 3,100 microg/L. The median arsenic level was 2.0 microg/L. The arsenic levels were below the federal drinking-water standard of 10 microg/L in 80% of the wells, while 11% had an arsenic level of above 20 microg/L. Of residents aged over 35 years, those who had consumed arsenic-contaminated water for at least 10 years were significantly more likely to report a history of skin cancer than others. Tobacco use was also associated with higher rates of skin cancer and appeared to synergize the effect of arsenic on the development of skin cancer.

Publication Types:
Current research problems of chronic arsenicosis in China.


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Chronic arsenicosis is a newly-emerged public-health issue in China and many other Asian countries. Over 200 million people are estimated to be at the risk of high arsenic exposure from drinking-water in the Asian region. To protect people from the hazards of chronic arsenic poisoning, the Chinese Government has been providing low-arsenic drinking-water to some seriously-affected rural areas, such as Inner Mongolia autonomous province. Results of follow-up studies showed that both the average values of arsenic, including inorganic arsenic (iAs), monomethylated arsenic, dimethylated arsenic and trimethylated arsenic, and 8-hydroxydeoxyguanine in urine, decreased significantly after drinking low-arsenic water for one year, and arsenic-specific skin lesions also improved to some extent. However, a five-year follow-up study showed no more significant improvement of skin lesions, while the potential risk of arsenic-induced cancers after cutting off high-arsenic exposure was still uncertain and indefinite. The susceptibility of children compared to adults to chronic arsenic exposure and the need to re-evaluate the appropriate standard of arsenic in drinking-water were also discussed in this paper.

Publication Types:
Review

PMID: 17195558 [PubMed - indexed for MEDLINE]

An eight-year study report on arsenic contamination in groundwater and health effects in Eruani village, Bangladesh and an approach for its mitigation.

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Based on several surveys during 1997-2005 and visits of a medical team to Eruani village, Laksham upazila, Comilla district, Bangladesh, the arsenic contamination situation and consequent clinical manifestations of arsenicosis among the villagers, including dermatology, neuropathy, and obstetric outcome, are reported here. Analysis of biological samples from patients and non-patients showed high body burden of arsenic. Even after eight years of known exposure, village children were still drinking arsenic-contaminated water, and many of them had arsenical skin lesions. There were social problems due to the symptoms of arsenicosis. The last survey established that there is a lack of proper awareness among villagers about different aspects of arsenic toxicity. The viability of different options of safe water, such as dugwells, deep tubewells, rainwater harvesting, and surface water with watershed management in the village, was studied. Finally, based on 19 years of field experience, it was felt that, for any successful mitigation programme, emphasis should be given to creating awareness among villagers about the arsenic problem, role of arsenic-free water, better nutrition from local fruits and vegetables, and, above all, active participation of women along with others in the struggle against the arsenic menace.

PMID: 17195555 [PubMed - indexed for MEDLINE]


Comment in:

[Pharmacological interactions in patients treated with oral anticoagulants in a rural health area]

[Article in Spanish]
OBJECTIVES: To estimate the prevalence of drugs that interact with oral anticoagulants and establish relationships between variables and haemorrhagic complications. DESIGN: Longitudinal, retrospective study of patient anticoagulant. SETTING: Colmenar basic health area, Malaga, Spain. PARTICIPANTS: Patients on anticoagulants followed up in primary care. MAIN MEASUREMENTS: Indications, time of follow-up, value of last prothrombin time (INR), complications and therapeutic groups of major use. RESULTS: The 74.2% of the patients had a prothrombin time (INR) in the therapeutic range; 16.14% had minor complications; 60.2% of the patients complied with the criteria of multiple medication and 88.2% complied with the criteria of multiple medication in the last 6 months. The drugs used with a higher capacity to interact are: anti-ulcer (26.9%), locomotor system (10.7%), cardiovascular drugs (2.2%), lipid lowering drugs (8.6%), and antidiabetics (17.2%). The number of drugs used in the last 6 months is associated with the presence of haemorrhagic complications (odds ratio [OR], 1.10). Allopurinol and pantoprazole had a significant relationship with the presence of minor haemorrhages (OR, 19.25 and 7.37, respectively). The variables associated with the presence of a haemorrhage were: allopurinol (OR, 25.84), number of controls with an INR outside the therapeutic range in the last 6 months (OR, 1.31) and time on treatment (OR, 1.07). CONCLUSIONS: The percentage of patients within the therapeutic range in the last determination of INR indicates good quality. The number of minor complications exceeded the consensus standard for the control of patients on anticoagulants. The use of drugs with a higher capacity for interacting with oral anticoagulants was very high in the anti-ulcer and antidiabetic groups. Pharmacological control of patients on anticoagulants is necessary and multiple medications should be avoided.
English Abstract

PMID: 17194366 [PubMed - indexed for MEDLINE]


The doctor in colonial Connecticut. 1956.

Thoms H.

Publication Types:
Classical Article
Historical Article

PMID: 17190394 [PubMed - indexed for MEDLINE]


Assessing healthful eating among community dwelling rural older adults using self-reported fruit and vegetable consumption via a community-wide mail-out health status assessment.

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This project assessed fruit and vegetable intakes among rural older adults on a regional mail-out community health assessment. Over 95% of respondents answered questions regarding fruit and vegetable consumption. Rural older adults in this sample were willing to respond to questions regarding their fruit and vegetable intake; yet they were not likely to be meeting minimum recommended intakes of these foods. Including questions about dietary healthfulness on such an assessment may provide key stakeholders and policymakers a clearer understanding of their community's overall health status.

PMID: 17182469 [PubMed - indexed for MEDLINE]

Complementary therapy and older rural women: who uses it and who does not?

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BACKGROUND: Despite the growing use of complementary therapy by consumers in the United States, very little is known about the factors associated with the use of these therapies among older rural women. OBJECTIVE: The aim of this study was to answer the following research question using data from a portion of a larger study: What factors predict the use of complementary therapy among older rural women? METHODS: Data were collected by telephone interview from a random sample of older residents of 19 rural towns in Montana and North Dakota. Interviews were conducted using a guide that included questions about the use of allopathic and complementary healthcare and related issues such as health status, health problems, and reasons for seeking care. A direct logistic regression analysis was performed on the use of complementary or alternative medicine (CAM) as outcome and eight potential predictors. Data from 156 women were included in this analysis. RESULTS: A total of 25.6% (n=40) of the women reported using CAM in the recent past. Rural women most likely to use CAM were those who were fairly well educated, not currently married, and in their early older years. They had one or more significant chronic illnesses and lower health-related quality of life due to emotional concerns. DISCUSSION: By improving the existing understanding of who is or is not likely to use CAM, the results of this study can be used in giving comprehensive care for rural women, including all healthcare practices, self-care and practitioner provided, and complementary and conventional.

Publication Types:
Multicenter Study
Research Support, N.I.H., Extramural

PMID: 17179871 [PubMed - indexed for MEDLINE]

Pharmacists' perceptions of controlled substance abuse in the rural upper peninsula of Michigan.

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PMID: 17176692 [PubMed - indexed for MEDLINE]


Prevalence of symptomatic knee, hand, and hip osteoarthritis in Greece. The ESORDIG study.

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OBJECTIVE: To assess the prevalence of symptomatic knee, hand, and hip osteoarthritis (OA) in the general adult population of Greece. METHODS: This cross-sectional population based study was conducted on the total adult population of 7 communities (8547 subjects) and on 2100 out of 5686 randomly selected subjects in an additional 2 communities. Sixteen rheumatologists visited the target population at their homes; an interview based on a standardized questionnaire was conducted and clinical evaluation and laboratory investigations were done, when necessary. ACR classification criteria were used for diagnosing symptomatic OA. RESULTS: Of the final target population of 10,647 subjects, 8740 (82.1%) participated in the study. The age and sex adjusted prevalence of symptomatic knee, hand, and hip OA was 6.0% (95% CI 5.6-6.4), 2% (1.8-2.2), and 0.9% (0.7-1.1), respectively. Symptomatic knee, hand, and hip OA prevalence was significantly higher among women than men and increased significantly with age. Symptomatic knee OA was significantly more common in the
rural compared to urban and suburban populations. Logistic regression analysis showed a significant association of female sex and age \( \geq 50 \) years with all sites of OA, of obesity with knee and hip OA, and of a low level of education with knee OA. CONCLUSION: Symptomatic knee, hand, and hip OA is common in the general adult population of Greece, showing a female preponderance and a prevalence increasing with age. Female sex and age are risk factors for all sites of OA, obesity for knee and hip OA, and a low level of education for knee OA.

PMID: 17143985 [PubMed - indexed for MEDLINE]


Prevalence of metabolic syndrome and its relation to body composition in a Chinese rural population.


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OBJECTIVE: To investigate the prevalence of metabolic syndrome (MetS) with three different working definitions in a rural Chinese population and to examine its relation to body composition. RESEARCH METHODS AND PROCEDURES: A total of 18,630 adults 25 to 64 years old (mean age, 45.8 years; 51.2% men) from 5686 families were enrolled from Anhui province of China during 2004 to 2005. Anthropometric measurement, body composition, blood pressure, plasma lipids, and fasting glucose and insulin and a questionnaire-based interview were obtained from each participant. Three different working definitions for MetS, including the U.S. National Cholesterol Education Program's Adult Treatment Panel III, a modified Adult Treatment Panel III that adopts the World Health Organization's criterion for central obesity in Asian populations, and one recently proposed by the International Diabetes Federation, were used in the study. RESULTS: According to the three definitions, the age-adjusted prevalence of MetS for adults 25 to 64
years old was 3.2%, 4.9%, and 3.9% in men and 7.2%, 11.5%, and 10.9% in women, respectively. MetS prevalence increases significantly with age in women, but not in men. Body fat percentage and BMI and waist circumference were significantly associated with each component of MetS, especially with triglyceride level, insulin resistance index, and number of MetS components ($r = 0.28$ to $0.49$).

DISCUSSION: The age-adjusted prevalence of MetS in our study population is lower than that reported in other urban Chinese populations. Significant gender differences in MetS prevalence were observed. The waist circumference is a good surrogate for abdominal fat percentage.

Publication Types:
  Research Support, N.I.H., Extramural

PMID: 17135627 [PubMed - indexed for MEDLINE]


Under-use of bisphosphonates in rural elderly women who have sustained fractures.

Naunton M, Peterson G, Jones G.

Publication Types:
  Letter

PMID: 17121511 [PubMed - indexed for MEDLINE]


Potentially pathogenic spotted fever group rickettsiae present in Western Australia.

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PMID: 17121510 [PubMed - indexed for MEDLINE]

A technically simple method for staining of acid-fast bacilli in cytology smears: an evaluation.

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OBJECTIVE: To study the effects of modifications in the Ziehl-Neelsen staining procedure on predictive accuracy for acid fast bacilli in comparison to the conventional technique. Simplicity of procedure and reagent economy were the factors taken into consideration. DESIGN: Comparative evaluation between thick and thin air-dried smears stained conventionally and thick ethanol-fixed smears stained by the modified technique was done. RESULTS: Positive predictive accuracy of all the three smears, that is, thick air-dried, thin air-dried and thick ethanol-fixed, was 100%. Negative predictive accuracy for thick air-dried, thin air-dried and thick ethanol-fixed smears was 36.36%, 32.33% and 34.78%, respectively. Overall predictive accuracy was 66.67% for thick air-dried, 61.90% for thin air-dried and 64.29% for thick ethanol-fixed. These differences were found to be statistically insignificant. CONCLUSION: The modified method offers an accuracy comparable to the conventional technique, is simpler and with improved reagent economy. It is of special importance to diagnostic facilities in rural set-ups.

Publication Types:
  Comparative Study
  Validation Studies

PMID: 17121509 [PubMed - indexed for MEDLINE]


Comment in:

OBJECTIVE: The aim of the present study was to detect how a leading newspaper, the Land Lantbruk in Stockholm, Sweden, informs the public and specifically the rural sector in Sweden and the Scandinavian countries concerning injury events (farm-related injury event) and the use of injury prevention and control. Injury reporting in the Land Lantbruk has been studied from the point of injury prevention and control. A study of injury prevention and rural health and safety in Australia shows that the newspaper The Land that serves Australia's rural community should 'be an under-utilised vehicle for news and commentary on rural health and safety issues'.

DESIGN: The study period was from January 2000 to February 2005. A total of 178 articles were reviewed and analysed. The articles were available on a newspaper database in the Land Lantbruk newspaper. Articles that addressed farm-related injury event and rural health and safety were chosen and organised into subgroups.

RESULTS: Tractor and motor vehicle safety (35%) was most common among the injury reporting. Although the newspaper Land Lantbruk provided excellent coverage of the causes of these events, the reports tended to focus on circumstances and did not provide information on injury prevention or the advantages of also coverage of the social and psychosocial long-term consequences of accidents.

CONCLUSION: In the prevention work of reducing farm-related injuries in the rural sector in the Scandinavian countries and decreasing the human suffering represented by this health problem, rural politicians, insurance companies, rural authorities and also handicap organisations should listen more to the injured individuals and their own experiences relative to the difficulty of life after an accident. The reaction of family and relatives, and experiences of the long-term social consequences, have not been included in the media coverage. Journalists at the Land Lantbruk could also share experiences of the Swedish coverage of rural health and safety from Australian journalists from The Land.
Human plague in the Western Usambara Mountains in Tanzania has been a public health problem since the first outbreak in 1980. The wildlife reservoir is unknown and eradication measures that have proved effective elsewhere in Tanzania appear to fail in this region. We use census data from 2002 and hospital records kept since 1986 to describe the temporal, spatial and demographic variation in human plague. A seasonal peak in cases occurs from December to February with the numbers of cases during this peak varying between 0 and 1150. Variation in incidence, calculated for each village as the mean number of cases per thousand inhabitants per year, indicates that human plague is concentrated around a group of three neighbouring, relatively isolated, high-altitude villages; Nywelo, Madala and Gologolo. However, there was no evidence that these villages were acting as a source of infection for the remainder of the focus. The likelihood of becoming infected with plague is highest between the ages of 5 and 19 and lowest for adult men. This was most clear in the ward encompassing the three high-incidence villages where the risk of plague among children aged 10-14 was 2.2 times higher than for adults aged 30-34, and among adults aged 30-34, the risk was 2.4 times higher for women than men.
The promotion of pyrethroid impregnated bednets among the populations is a major activity of the National Malaria Vector Control Programs in African tropical countries. However pyrethroid resistance in Anopheles gambiae, a major malaria vector, has been observed in several parts of Cote-d'Ivoire since 1993. As insecticides used in agriculture against pests are frequently considered as important factors responsible for resistance in malaria vectors, we have evaluated insecticide resistance of An. gambiae populations taking into account the main crops cultivated in Cote-d'Ivoire. Five areas were selected according to the use of insecticide either in agriculture or for domestic purposes: a urban area where vegetables and rice are main crops, a rural rice growing area, a rural area of coffee/cocoa production, a rural area of fruit farming and a rural area without any use of agricultural insecticide. Susceptibility tests were carried out using WHO diagnostic test kits. About 6500 females of An. gambiae were exposed to insecticide impregnated papers (permethrin 1%, deltamethrin 0.05%, DDT 4%) for one hour. Results confirmed that both mortality rates and knockdown time analysis were important to study the resistance data.

By using mortality rates, populations of An. gambiae were found to be resistant to pyrethroids and DDT in four of the five areas. Resistance was the highest in urban area, lower in fruit and coffee/cocoa areas and at low level in rice growing area. An. gambiae from area without agricultural treatment was found susceptible to pyrethroids but slightly resistant to DDT A significant increase of knockdown time was observed in all areas with the 3 insecticides. These
results agreed with previous studies showing that kdr mutation was the main resistance mechanism to pyrethroids in An. gambiae populations in Cote-d'Ivoire. They also agreed with knockdown time which is an early indicator of resistance development for the population in area without agricultural treatment. In this population the frequency of homozygous resistant individuals was probably too low to have a significant decrease of mortality rates to pyrethroids.

Publication Types:
   English Abstract

PMID: 17111979 [PubMed - indexed for MEDLINE]


Alternative anthropometric measurements for the Thai elderly: Mindex and Demiquet.

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This cross-sectional study examined the relationship between alternative anthropometric indices and the nutritional and metabolic status of the Thai elderly. Four rural communities, each from the 4 main regions of Thailand were surveyed. A total of 2,324 subjects, 60 years old and over were included in the study. Mindex and Demiquet had a very strong relationship to body mass index with the r values of 0.93 and 0.88, respectively. Fat weight had the highest correlation with body mass index in older women, $r = 0.94$ ($P< 0.001$) and with Mindex, $r = 0.93$ ($P< 0.001$). In regard to anthropometric measurements, the mid-arm circumference had the strongest relationship to all three Quetelet indices, $r = 0.76-0.87$ ($P< 0.001$), while subscapular skinfold thickness performed best among skinfold measurements, $r = 0.69-0.74$ ($P< 0.001$). BMI achieved a significantly higher degree of correlation with triceps and supra-iliac skinfold thickness, mid-arm circumference and fat weight than Demiquet ($P< 0.001$ for all variables). The lymphocyte count was the only laboratory test that related rather well to all three Quetelet indices. All three Quetelet indices had nearly the same pattern of relationship to various nutritional parameters. The cut-off points of Mindex denoting under-nutrition, overweight and obesity I in women were 55.95, 69.55 and 75.60 kilogram/metre, respectively. At the same time, the cut-off points of Demiquet denoting
under-nutrition, overweight and obesity I in men were 75.60, 93.98 and 102.16 kilogram/metre², respectively. All this information supports the benefit of using Mindex and Demiquet as alternatives to body mass index for nutritional assessment in older Asian people, especially for the malnourished ones.

Publication Types:
  Research Support, Non-U.S. Gov’t

PMID: 17077069 [PubMed - indexed for MEDLINE]


Risk factors for malnutrition among rural Nigerian children.

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Protein Energy Malnutrition (PEM) remains a major public health problem in the developing world. The aim of this study was to determine the current nutritional status and the influence of feeding practices and family characteristics on the nutritional status of under-five rural Nigerian children. It was conducted using a cross sectional, community based survey design. From 344 households, 420 children were studied. Using the modified Wellcome Classification, the prevalence of PEM was 20.5 percent whereas the prevalence of underweight, wasting and stunting using the World Health Organization/ National Centre for Health Statistics (WHO/NCHS) standards were 23.1 percent, 9 percent and 26.7 percent respectively. Young age was significantly associated with a higher prevalence of underweight (P = 0.004). Overcrowding, low maternal income and the use of infant formula feeds in children who have attained the age of 6 months and above were associated with a higher prevalence of wasting (P = 0.029, P = 0.031 and P = 0.005 respectively). Improved living standard of families, empowerment of mothers with the aim of augmenting family income and parental education on appropriate feeding practices may help in reducing the incidence of under-five malnutrition in communities. The low prevalence rate of malnutrition was probably due to activities of the NGO in this community. This method of intervention is similarly achievable in any other community.

PMID: 17077064 [PubMed - indexed for MEDLINE]
Anaemia and pregnancy outcomes in a South African rural population.

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The purpose of this study was to evaluate whether the booking haemoglobin (Hb) did affect the mode of delivery or the birth weight. A total of 3,214 booking Hb was available from 1,628 primiparas and 1,586 multiparas. A total of 507 had a caesarean section and 2,707 a spontaneous vaginal delivery (SVD). Moderate and severe anaemia were defined, respectively as an Hb of <10 and <8 g/dl. There were only 112 women with recorded evidence of iron and folate supplementation. The overall prevalence of anaemia was 19.7%. Multigravidas with SVD had a 22.5% prevalence of booking Hb <10 vs 14.2% in primigravidas (p < 0.0001). The prevalence of severe anaemia was similar for all subgroups. Simple regression analysis showed no significant correlation between the booking Hb and pregnancy outcome in terms of birth weight or mode of delivery. However, booking visit anaemia could predispose to caesarean delivery. Documented iron and folate supplementation did not appear to result in different pregnancy outcomes.

PMID: 17071424 [PubMed - indexed for MEDLINE]

Impact and management of dual relationships in metropolitan, regional and rural mental health practice.

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OBJECTIVE: To explore the extent and impact of professional boundary crossings.
in metropolitan, regional and rural mental health practice in Victoria and identify strategies mental health clinicians use to manage dual relationships. METHOD: Nine geographically located focus groups consisting of mental health clinicians: four focus groups in rural settings; three in a regional city and two in a metropolitan mental health service. A total of 52 participants were interviewed. RESULTS: Data revealed that professional boundaries were frequently breached in regional and rural settings and on occasions these breaches had a significantly negative impact. Factors influencing the impact were: longevity of the clinician’s relationship with the community, expectations of the community, exposure to community 'gossip' and size of the community. Participants reported greater stress when the boundary crossing affected their partner and/or children. Clinicians used a range of proactive and reactive strategies, such as private telephone number, avoidance of social community activities, when faced with a potential boundary crossing. The feasibility of reactive strategies depended on the service configuration: availability of an alternative case manager, requirement for either patient or clinician to travel. The greater challenges faced by rural and regional clinicians were validated by metropolitan participants with rural experience and rural participants with metropolitan experience. CONCLUSIONS: No single strategy is used or appropriate for managing dual relationships in rural settings. Employers and professional bodies should provide clearer guidance for clinicians both in the management of dual relationships and the distinction between boundary crossings and boundary violation. Clinicians are clearly seeking to represent and protect the patients' interests; consideration should be given by consumer groups to steps that can be taken by patients to reciprocate.

PMID: 17054567 [PubMed - indexed for MEDLINE]


Health-related quality of life of Canadian children and youth prenatally exposed to alcohol.

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BACKGROUND: In Canada, the incidence of Fetal Alcohol Spectrum Disorder (FASD) has been estimated to be 1 in 100 live births. Caused by prenatal exposure to alcohol, FASD is the leading cause of neuro-developmental disabilities among Canadian children, and youth. Objective: To measure the health-related quality of life (HRQL) of Canadian children and youth diagnosed with FASD.

METHODS: A prospective cross-sectional study design was used. One-hundred and twenty-six (126) children and youth diagnosed with FASD, aged 8 to 21 years, living in urban and rural communities throughout Canada participated in the study. Participants completed the Health Utilities Index Mark 3 (HUI3). HUI3 measures eight health attributes: vision, hearing, speech, ambulation, dexterity, emotion, cognition, and pain. Utilities were used to measure a single cardinal value between 0 and 1.0 (0 = all-worst health state; 1 = perfect health) to reflect the global HRQL for that child. Mean HRQL scores and range of scores of children and youth with FASD were calculated. A one-sample t-test was used to compare mean HRQL scores of children and youth with FASD to those from the Canadian population. RESULTS: Mean HRQL score of children and youth with FASD was 0.47 (95% CI: 0.42 to 0.52) as compared to a mean score of 0.93 (95% CI: 0.92 to 0.94) in those from the general Canadian population (p < 0.001). Children demonstrated moderate to severe dysfunction on the single-attributes of cognition and emotion. CONCLUSION: Children and youth with FASD have significantly lower HRQL than children and youth from the general Canadian population. This finding has significant implications for practice, policy development, and research.

PMID: 17040571 [PubMed - indexed for MEDLINE]


Could a rural lifestyle decrease the prevalence of erectile dysfunction?

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OBJECTIVE: To determine the prevalence of erectile dysfunction (ED) in a specific population and explore potential correlates with lifestyle. SUBJECTS AND METHODS: This prospective observational study, covering a population of a very small rural town, included 2000 men aged > or = 20 years from a total population of 121 831 (51% female and 49% male). The International Index of Erectile Function was completed by each of the 2000 men at their homes over a 1-year period. Another questionnaire assessing socio-economic status and health-related determinants of ED were also completed. RESULTS: All 2000 men completed the questionnaires; overall, only 34 reported ED (1.7%). The frequency of mild, mild to moderate, moderate and severe ED was 12%, 29%, 20% and 38%, respectively. Significantly more men aged > 51 years had ED than those aged <41 years (0.05% and 0.45%, respectively; P < 0.001). There was no difference in ED with salary levels. CONCLUSION: The prevalence of ED in this particular rural population of Brazil was very low, at only 1.7%. Although ED increases with age, this association was not apparent for all age groups. It seems that several others factors, e.g. lifestyle, culture and diet, could be important for the onset of ED.

PMID: 17034491 [PubMed - indexed for MEDLINE]


Motorcycle deployment and rider characteristics on Victorian farms.

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OBJECTIVE: To describe the motorcycle fleet and rider characteristics on Victorian farms. DESIGN: Cross-sectional postal survey. SETTING: Victorian agricultural industries. PARTICIPANTS: A total of 1382 randomly selected farmers in 2001. MAIN OUTCOME MEASURES: Farm motorcycle characteristics, use and
maintenance schedule; motorcycle rider characteristics, respondent demographics and property characteristics. RESULTS: A total of 70% of farms had motorcycles, with an average of 1.7 per property. A total of 49% were four-wheel, and 44% were two-wheel. The average engine size and age were 255 cc and 8.8 years, respectively. The milk cattle sector owned the largest share of the motorcycle fleet and cereal/grain farms the smallest share. Four-wheel motorcycles were often used across the entire spectrum of agricultural tasks. Two-wheel motorcycle use was concentrated more on mustering and transport. A total of 61% of farms performed motorcycle maintenance every 1-6 months. Fifteen percent of riders were under 15 years of age, and the majority (71%) rode four-wheel motorcycles. A total of 29% of all riders had received some form of motorcycle training. CONCLUSIONS: This study provides useful information on state-level patterns of farm motorcycle use, as well as the key safety behaviours of rider training and motorcycle maintenance. This information might serve as baseline data for future monitoring and surveillance, and might assist with planning of prevention programs.

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 17032294 [PubMed - indexed for MEDLINE]


Social determinants of access to reference care centres for patients with colorectal cancer--a multilevel analysis.

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BACKGROUND: Although social disparities in survival for patients with cancer are documented in an increasing number of papers, knowledge on the underlying mechanisms concerning screening, diagnosis, treatment or follow-up, is relatively poor. Our study was aimed at investigating the social determinants of access to reference cancer care centres for surgery for colorectal cancer in France. METHODS: Retrospective analysis was conducted on population-based data from a specialised cancer registry (County of Calvados, France). The population
consisted of 5156 patients with surgical treatment for colorectal cancer recorded between January 1st 1981 and December 31st 2000. RESULTS: The probability of being cared for in a reference care centre was 1.3-fold lower for people living in a deprived district (mean income < 15000 euros) and 3-fold lower for people living in a district where more than 7% of houses were devoid of bath and shower in comparison with districts where this rate was under 2%. After adjustment for distance from reference care centre, the probability of being cared for in a reference care centre was still over one third lower for people living in a district with more than 7% of houses devoid of bath and shower. Social disparities in management of patients with colorectal cancer have increased in the last decade. The reduction of access to reference care with distance was stronger in elderly patients. CONCLUSIONS: There is a social and geographical determination of type of treatment centre for care management of colorectal cancer in France. Special attention needs to be paid to the high quality of care management in non-specialised care centres in order to avoid an increased social gradient in cancer mortality in France.

PMID: 17029939 [PubMed - indexed for MEDLINE]


Short-term effects of atmospheric temperature and humidity on morbidity from acute coronary syndromes in free of air pollution rural Greece.

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STUDY OBJECTIVE: An evaluation of the effect of ambient temperature on morbidity from acute coronary syndromes (ACS) while avoiding confounding by air pollution.

DESIGN: An ecological study in rural Greece. METHODS: Daily admissions to hospital because of ACS were recorded for 1 year and analysed versus daily temperature and humidity. RESULTS: For a 1 degrees C decrease in temperature there was a 1.6% (95% confidence interval 0.9-2.2%) increase in admissions. This effect was more prominent in the elderly. No difference was detected according
to sex or type of ACS. CONCLUSION: It is important to implement measures against cold in coronary heart disease prevention, irrespective of air pollution.

PMID: 17001228 [PubMed - indexed for MEDLINE]


Heat-related and cold-related deaths in England and Wales: who is at risk?

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BACKGROUND: Despite the high burden from exposure to both hot and cold weather each year in England and Wales, there has been relatively little investigation on who is most at risk, resulting in uncertainties in informing government interventions. OBJECTIVE: To determine the subgroups of the population that are most vulnerable to heat-related and cold-related mortality. METHODS: Ecological time-series study of daily mortality in all regions of England and Wales between 1993 and 2003, with postcode linkage of individual deaths to a UK database of all care and nursing homes, and 2001 UK census small-area indicators. RESULTS: A risk of mortality was observed for both heat and cold exposure in all regions, with the strongest heat effects in London and strongest cold effects in the Eastern region. For all regions, a mean relative risk of 1.03 (95% confidence interval (CI) 1.02 to 1.03) was estimated per degree increase above the heat threshold, defined as the 95th centile of the temperature distribution in each region, and 1.06 (95% CI 1.05 to 1.06) per degree decrease below the cold threshold (set at the 5th centile). Elderly people, particularly those in nursing and care homes, were most vulnerable. The greatest risk of heat mortality was observed for respiratory and external causes, and in women, which remained after control for age. Vulnerability to either heat or cold was not modified by deprivation, except in rural populations where cold effects were slightly stronger in more deprived areas. CONCLUSIONS: Interventions to reduce vulnerability to both hot and cold weather should target all elderly people. Specific interventions should also be developed for people in nursing and care homes as heat illness is easily preventable.
Incidence and risk factors for hepatitis C seroconversion in injecting drug users in Australia.

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AIMS: To determine the incidence of hepatitis C virus (HCV) infection and identify risk factors for seroconversion. DESIGN: Prospective cohort study. Participants were recruited through direct approaches, street-based outreach, methadone and sexual health clinics and needle and syringe programmes. SETTING: Urban, regional and rural settings in New South Wales, Australia. PARTICIPANTS: Injecting drug users (IDUs) (n = 584) were screened and tested for exposure to HCV. Between 1999 and 2002 antibody HCV negative IDUs (n = 368) were enrolled and followed-up every 3-6 months until seroconversion or study completion. MEASUREMENTS: Interviewer-administered baseline and follow-up questionnaires consisted of 131 items and included demographics, drug use and risk behaviour. Approximately 10 cc of whole blood was drawn at each visit. Specimens were stored at -70C and serology performed using one or two third-generation enzyme-linked immunosorbent assays and polymerase chain reaction testing. FINDINGS: Sixty-eight seroconversions were observed and incidence was 30.8 per 100 person-years, with incidence in IDUs injecting < 1 year, 133 per 100 person-years. Independent predictors of seroconversion were female gender, duration of injecting, injecting cocaine, shared use of filters and recruitment strategy. CONCLUSIONS: Women, new initiates and IDUs recruited via outreach.
appear to be at increased risk of infection. Results confirm the significance of cocaine injection as a risk factor and provide the first evidence outside North America of the link between shared use of drug preparation equipment and incident HCV infection. Prevention efforts should attempt to raise awareness of the risks associated with drug sharing and, in particular, the role of potentially contaminated syringes in HCV infection.

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 16968352 [PubMed - indexed for MEDLINE]


Risk factors associated with porcine cysticercosis in selected districts of Eastern and Southern provinces of Zambia.


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To determine the risk factors associated with Taenia solium transmission in humans and pigs in the rural areas of Eastern and Southern provinces of Zambia, a questionnaire was administered in 788 households from 155 villages. Pigs were examined from 800 households. Tongue examination and enzyme-linked immunosorbent assay (Ag-ELISA) for the detection of circulating antigens of T. solium cysticerci were used to measure infection in pigs. A snowballing technique was utilised to select households with pigs. Prevalence of households with pigs infected with T. solium on tongue examination by district ranged from 12.7% to 32.1% with Ag-ELISA having a range of 30.0-51.7%. Of the total number of households visited, 18.8% and 37.6% had at least one pig positive for porcine cysticercosis on tongue examination and Ag-ELISA, respectively. Risk factors associated with T. solium infection were lack of pork inspection at slaughter (96.7%), consumption of pork with cysts (20.1%), selling of pork infected with T. solium cysticerci (18.3%), free-range husbandry system (83.2%) and absence of latrines (58.0%). Free-range husbandry system (OR=1.68; 95% CI=1.36-2.07) was a significant risk factor for porcine cysticercosis in the surveyed areas. The result that pigs were mostly kept on free-range and semi-intensive husbandry systems may have permitted them to have access to eating human faeces that could be contaminated with tapeworm eggs. This study has shown that T. solium
infection poses a high public health risk in the study areas and urban areas as well. We recommend that a human survey be conducted to verify the human exposure to taeniasis and/or cysticercosis in Zambia.

Publication Types:  
  Research Support, Non-U.S. Gov’t

PMID: 16956727 [PubMed - indexed for MEDLINE]


Economic causes and effects of AIDS in South African households.

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OBJECTIVE: To investigate the magnitude and temporal directionality of associations between illness and death, and income and expenditure, in households affected by HIV/AIDS. DESIGN AND SUBJECTS: A cohort study with repeated measures carried out in 405 households (1913 occupants), known to have HIV-infected occupants and their neighbours, in one rural and one urban area of South Africa. MAIN OUTCOME MEASURES: Monthly adult equivalent income and expenditure. Illness episodes and deaths attributed to HIV/AIDS, tuberculosis and pneumonia. METHODS: Interview surveys of household heads were conducted at baseline and five more times, biannually, providing information on household economics, illnesses and deaths. Regression analyses used marginal structural models and 'before-after' models to analyse changes. RESULTS: In marginal structural models, current or previous AIDS illness was independently associated with 34% [95% confidence intervals (CI) 23-43%] lower monthly expenditure, and current or recent poverty was associated with 1.74 (95% CI 0.94-3.2) times higher odds of an AIDS death. In before-after models, each AIDS death was independently associated with a 23% (95% CI 11-34%) greater expenditure decline over 3 years, and a 100 US dollars higher monthly expenditure at baseline was
associated with 0.31 (95% CI 0.13-0.74) times as many AIDS deaths and with 0.41 (95% CI 0.27-0.64) times as many AIDS illness episodes over 3 years.

CONCLUSION:
AIDS deaths and illnesses predicted declining expenditure and poverty predicted AIDS, suggesting that both welfare and effective treatment are needed.

Publication Types:
Research Support, U.S. Gov't, Non-P.H.S.

PMID: 16954727 [PubMed - indexed for MEDLINE]


Hospitalizations of pregnant HIV-infected women in the USA prior to and during the era of HAART, 1994-2003.

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BACKGROUND: The literature on whether HIV infection and its complex antiretroviral treatments confer a higher risk for adverse pregnancy outcomes is controversial. OBJECTIVE: We compared rates of hospitalization for select morbidities among HIV-infected and uninfected pregnant women in the USA. DESIGN AND METHODS: Using data from the 1994-2003 Nationwide Inpatient Sample, we used descriptive statistics and multivariate logistic regression to examine socio-demographic characteristics, morbidity outcomes and time trends. RESULTS: There were approximately 6000 hospitalizations per year of HIV-infected pregnant women in the USA. HIV-infected women were more likely to be hospitalized in urban hospitals, in the South, have Medicaid as the expected payer, have longer hospitalizations and incur higher charges than uninfected women. Hospitalizations for major puerperal sepsis, genitourinary infections, influenza, bacterial infections, preterm labor/delivery, and liver disorders were more frequent among pregnant HIV-infected women than their uninfected
counterparts. However, rates of pre-eclampsia and antepartum hemorrhage were not significantly different. While rates of inpatient mortality and various infectious conditions decreased between 1994 and 2003, the rate of gestational diabetes increased among HIV-infected pregnant women. CONCLUSIONS: HIV-infected pregnant women in the USA continue to be at higher risk for morbidity and adverse obstetric outcomes. With the introduction of antiretroviral therapy, rates of most of the conditions examined have either decreased or remained stable, hence current antiretroviral regimens do not seem to be associated with major adverse pregnancy outcomes on a population basis. The increase in gestational diabetes among HIV-infected women may be associated, in part, with antiretroviral therapy and merits further attention.

PMID: 16954723 [PubMed - indexed for MEDLINE]


Disclosure of HIV serostatus to sex partners in rural Louisiana.

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To examine correlates of HIV disclosure, a convenience sample of 273 HIV-infected persons throughout rural Louisiana were interviewed. Disclosure to sexual partners at time of initial HIV-positive diagnosis and the time of the study interview was ascertained (an average of 5.76 years later). The prevalence of disclosure to past and current sex partners was 57.2% and 80.7% respectively. Those who reinitiated sex with their partner since testing positive for HIV and those who received partner notification were more likely to disclose to past partners. Non-African Americans and those with only one partner were more likely to disclose to present sex partners. Much like urban settings, disclosure is not universal, and interventions such as disclosure skills building and/or ongoing partner notification services may be needed to facilitate disclosure.

PMID: 16938677 [PubMed - indexed for MEDLINE]
Characteristics of HIV-infected adults in the Deep South and their utilization of mental health services: A rural vs. urban comparison.

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Insufficient utilization of mental health services has been described among HIV-infected individuals in urban areas; however, little is known about utilization of mental health services among rural-living HIV-infected individuals. This article examines use of mental health services by HIV-infected adults in the Southern U.S., where approximately two-thirds of rural HIV cases reside, and compares mental health services use between those in rural and urban areas. Data were obtained from surveys of HIV-infected individuals receiving care at tertiary Infectious Diseases clinics in the Southern U.S. (n = 474). Study findings indicated that participants living in areas with a higher proportion of rural-living individuals were less likely to report seeing a mental health provider (p < .001) in the last year even though there were no differences in level of psychological distress by degree of rurality. Participants living in more rural areas also reported significantly fewer mental health visits in the previous month (p = .025). Furthermore, rural living was significantly associated with being African-American, heterosexual, less educated, and having minor children in the home. Due to differences in characteristics and mental health services use by degree of rurality, efforts are needed to assess and address the specific mental health and other needs of HIV-infected individuals in rural areas.

Publication Types:
   Research Support, U.S. Gov't, P.H.S.

PMID: 16938670 [PubMed - indexed for MEDLINE]
BACKGROUND & OBJECTIVES: Iodine deficiency disorder (IDD) is a major nutritional problem in India. The pregnant women and their neonates have been important target groups for study of the prevalence of IDD in a community. No such study was available to assess the prevalence of IDD among the pregnant women and neonates in the state of West Bengal. The present study was undertaken to assess the status of IDD in the pregnant women and its effect on the neonatal thyroid function in Burdwan district of West Bengal.

METHODS: The present study was a hospital-based, cross-sectional, non-interventional study among 267 full term pregnant mothers, and the neonates born to them. One hundred non pregnant healthy women were selected as controls. The overall iodine status of the pregnant and non pregnant women was estimated by measuring the urinary iodine excretion (UIE) and the serum thyroid stimulating hormone (TSH) levels. The neonatal thyroid function was estimated by measuring the TSH levels in their cord blood.

RESULTS: A total of 78.4 per cent pregnant women showed UIE > 10 mug/dl with 7 per cent having a UIE < 5 mug/dl. The median UIE and the serum TSH values in the pregnant women were found to be 14.4 mug/dl and 4.1 mIU/l, respectively. No statistically significant difference was found when compared with the control values. Only 2.9 per cent of the neonates showed a cord blood TSH value > 5 mIU/l which is just below the recommended criteria for mild endemicity for IDD in the study population.

INTERPRETATION & CONCLUSION:
Pregnant women of the study area were iodine repleted. The neonatal thyroid function was also within normal range. The findings of the present study indicates that the iodine supplementation of the salt should be maintained in the area with periodical surveillance.

PMID: 16885606 [PubMed - indexed for MEDLINE]


Nutrient intake and food consumption among pregnant women from an agricultural region of Morocco.
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This study aimed to assess dietary intake and nutrient adequacy in pregnant women selected from an agricultural region of Morocco. On a sample of 172 pregnant women from rural and urban area, data on socio-demographic characteristics and dietary habits by a quantified food frequency were collected using questionnaires. Mean daily intakes of energy and nutrients were estimated and compared to reference nutrient intakes (RNI). The results show that the mean daily intakes of energy (3110.9 kcal in urban; 2707.5 kcal in rural) and some nutrients were adequate. However, iron, folate, zinc and calcium intakes were inadequate for the majority of women and more markedly in rural area. Education level appeared to affect nutrient intakes while no differences were registered across pregnancy stages or according to household size. The study suggests that an education program should be conducted to improve dietary intakes in order to prevent risks for pregnancy outcome in this population.

PMID: 16849111 [PubMed - indexed for MEDLINE]


Feeding frequency and nutrient content of foods commonly consumed in the Iringa and Morogoro regions in Tanzania.

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Information on the nutrient content of foods commonly consumed (especially indigenous ones) in rural communities of Tanzania is limited. A study was conducted to determine the nutrient content of foods commonly consumed in the
Iringa and Morogoro regions. A survey was carried out in six representative villages to identify the types of foods and to determine the frequency of their consumption. Representative samples of the raw foods were collected from local markets and brought to the laboratory for analyses. Determination of protein was done by the micro-Kjeldahl method, fat by Soxhlet extraction and moisture by an oven-drying method. The mineral content was determined by atomic absorption spectrophotometer. The results showed that there is a wide range of foods commonly consumed in the two regions, especially legumes and vegetables. The frequency of consumption depended mainly on the season, whereby during the dry season the frequency of consumption was two to three meals per day and in the rainy season was one to two meals per day. Foods rich in fats were nuts and oil seeds, while good sources of protein included legumes, nuts and oil seeds especially pumpkin seeds, which contained 34.36 g/100 g edible portion. Indigenous vegetables such as mnavu (Solunum nigrum), twangalibidiga, mlenda (Corchorusolitarus) and mkochwe were rich in iron and calcium, with values as high as 24.78 mg iron in twangalibidiga and 812.41 mg calcium/100 g edible portion in mkunungu. Magnesium was highest in mtosi (288.58 mg) and copper was highest in mkunungu (0.49 mg). Mkochwe contained the highest amount of manganese. This study shows that foods locally produced in these regions are rich in nutrients, especially micronutrients, and therefore if consumed in adequate amounts may help to prevent dietary-related disorders.

Publication Types:
  Research Support, Non-U.S. Gov't

PMID: 16849110 [PubMed - indexed for MEDLINE]


Green space, urbanity, and health: how strong is the relation?

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STUDY OBJECTIVES: To investigate the strength of the relation between the amount of green space in people's living environment and their perceived general health. This relation is analysed for different age and socioeconomic groups. Furthermore, it is analysed separately for urban and more rural areas, because the strength of the relation was expected to vary with urbanity. DESIGN: The study includes 250,782 people registered with 104 general practices who filled in a self-administered form on sociodemographic background and perceived general health. The percentage of green space (urban green space, agricultural space, natural green space) within a one kilometre and three kilometre radius around the postal code coordinates was calculated for each household. METHODS: Multilevel logistic regression analyses were performed at three levels—that is, individual level, family level, and practice level—controlled for sociodemographic characteristics. MAIN RESULTS: The percentage of green space inside a one kilometre and a three kilometre radius had a significant relation to perceived general health. The relation was generally present at all degrees of urbanity. The overall relation is somewhat stronger for lower socioeconomic groups. Elderly, youth, and secondary educated people in large cities seem to benefit more from presence of green areas in their living environment than other groups in large cities. CONCLUSIONS: This research shows that the percentage of green space in people’s living environment has a positive association with the perceived general health of residents. Green space seems to be more than just a luxury and consequently the development of green space should be allocated a more central position in spatial planning policy.
in childhood malnutrition trends in Cameroon.

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BACKGROUND: It is generally hypothesized that macro economic shocks worsen child health by lowering household economic status and limiting access to health care, but this proposition seldom has been tested empirically. We examined the effects of economic crises and adjustment programmes during the 1990s in Cameroon on childhood malnutrition in population subgroups and evaluated the household and health system mediators of these effects. METHODS: We used pooled cross-sectional data from two Demographic and Health Surveys conducted in 1991 and 1998. In multivariate analysis, we stratified data on child sex and age, maternal education, and place and region of residence. We used a linear regression model to estimate the net effects of changes in average household economic status and maternal health seeking behaviour (MHSB) on changes in the prevalence of malnutrition for each stratum, adjusting for all other variables. RESULTS: The prevalence of malnutrition in children younger than 3 years increased from 16 to 23% (P < 0.001) between 1991 and 1998. The increase in urban areas, from 13 to 15% (P = 0.391), mostly occurred in children of low-educated mothers. The increase in rural areas, from 19 to 25% (P < 0.001), mostly occurred in boys, children older than 6 months of age, those born to low-educated mothers, and those of low economic status. In urban areas, the advantage associated with higher maternal education was robust to all controls, and declines in economic status and MHSB were the mediators of increasing malnutrition. In rural areas, increase in malnutrition was higher in children with lower baseline economic status; decline in MHSB was a significant mediator of worsening nutritional status. CONCLUSIONS: The negative nutritional effects during economic crises and adjustment programmes of the 1990s in Cameroon were largest among children of low socioeconomic status. Declines in household economic status and access to health care were the mediators of increasing

Rowe AK, Rowe SY, Snow RW, Korenromp EL, Schellenberg JR, Stein C, Nahlen BL, Bryce J, Black RE, Steketee RW.

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BACKGROUND: Although malaria is a leading cause of child deaths, few well-documented estimates of its direct and indirect burden exist. Our objective was to estimate the number of deaths directly attributable to malaria among children <5 years old in sub-Saharan Africa for the year 2000. METHODS: We divided the population into six sub-populations and, using results of studies identified in a literature review, estimated a malaria mortality rate for each sub-population. Malaria deaths were estimated by multiplying each sub-population by its corresponding rate. Sensitivity analyses were performed to assess the impact of varying key assumptions. RESULTS: The literature review identified 31 studies from 14 countries in middle Africa and 17 studies and reports from four countries in southern Africa. In 2000, we estimated that approximately 100 million children lived in areas where malaria transmission occurs and that 803 620 (precision estimate: 705 821-901 418) children died from the direct effects of malaria. For all of sub-Saharan Africa, including populations not exposed to malaria, malaria accounted for 18.0% (precision estimate: 15.8-20.2%) of child deaths. These estimates were sensitive to extreme assumptions about the causes of deaths with no known cause. CONCLUSIONS: These estimates, based on the best available data and methods, clearly demonstrate malaria's enormous mortality burden. We emphasize that these estimates are an approximation with many
limitations and that the estimates do not account for malaria's large indirect burden. We describe information needs that, if filled, might improve the validity of future estimates.

Publication Types:
  Research Support, Non-U.S. Gov't
  Review

PMID: 16507643 [PubMed - indexed for MEDLINE]


Comment in:


Mung'ala-Odera V, Meehan R, Njuguna P, Mturi N, Alcock KJ, Newton CR.

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BACKGROUND: There is little data on the burden of neurological impairment (NI) in developing countries, particularly in children of Africa. METHODS: We conducted a survey of NI in children aged 6-9 years in a rural district of Kenya. First, we screened for neurological disability by administering the Ten Questions Questionnaire (TQQ) to parents/guardians of children in a defined population. In phase two, we performed a comprehensive clinical and psychological assessment on children who tested positive on TQQ and on a similar number of children who tested negative. RESULTS: A total of 10 218 children were screened, of whom 955 (9.3%) were positive on TQQ. Of these, 810 (84.8%) were assessed, and of those who tested negative 766 (8.3%) were assessed. The prevalence for moderate/severe NI was 61/1000 [95% confidence interval (95% CI) 48-74]. The most common domains affected were epilepsy (41/1000), cognition (31/1000), and hearing (14/1000). Motor (5/1000) and vision (2/1000) impairments were less common. Of the neurologically impaired children (n = 251), 56 (22%)
had more than one impairment. Neonatal insults were found to have a significant
association with moderate/severe NI in both the univariate [odds ratio (OR) =
1.70; 95% CI 1.12-2.47] and multivariate analyses (OR = 1.30; 95% CI 1.09-
1.65).
CONCLUSIONS: There is a considerable burden of moderate/severe NI in this area
of rural Kenya, with epilepsy, cognition, and hearing being the most common
domains affected. Neonatal insults were identified as an important risk factor.

Publication Types:
Research Support, Non-U.S. Gov't

PMID: 16492712 [PubMed - indexed for MEDLINE]


Association of parasites and diarrhoea among children less than five years of age in a rural area in Egypt.

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A case control study was conducted in Kafr El-Sheikh Governorate, Egypt, a rural
community, to assess the relation of parasites and diarrhoea among children <5
years. A sample of 196 cases with diarrhoea and 83 non-diarrhoeic controls were
included in the study. A questionnaire was completed for every child and
weight and height were recorded. A stool sample was obtained and examined for parasites
present. The results revealed that 70.3% of cases had parasites compared to 59%
of controls. The most common parasites found were Entamoeba histolytica,
cryptosporidium, and Giardia lamblia consecutively. In both groups the percent
positive parasitic infection increased with age. The different socioeconomic and
sanitary indicators studied were similar among both groups and could not explain
the diarrhoea present except for the significantly higher presence of piped
water inside houses of controls. Study of malnutrition revealed that a
significantly higher percentage were stunted (15.6%) among cases than among
controls (6.5%) and 13.8% were wasted among cases compared to only 2% among controls. Undernourished cases were 14.8% compared to 4.3% of controls.

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Evaluation of the effectiveness of dipstick haematuria and proteinuria in screening Schistosoma haematobium infection among school children in upper Egypt.

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This study aimed at evaluation of validity and reliability of dipstick haematuria and proteinuria in screening school children for Schistosoma haematobium infection. It included a random sample of 400 school children aged 6-15 years in rural area of Fayoum Governorate, upper Egypt. Urine samples of the studied children were tested parasitologically by urine filtration technique as a reference test and semiquantitatively for haematuria and proteinuria using urine reagent strips as screening tests. Results of the study revealed that haematuria was a better indicator for Schistosoma haematobium infection than proteinuria, as it was more sensitive (85.5% 73.4%, respectively), specific (94.4% 82.9%, respectively) and reliable (kappa=92% 80%, respectively). Moreover, it had stronger relationship with intensity of infection (r=0.88 & 0.67, respectively). A combination of different grades of haematuria and proteinuria did not significantly increase either sensitivity or specificity. Dipstick haematuria could be a valuable technique in screening rural Egyptian school children who are at risk of urinary schistosomiasis.

Publication Types:
   Validation Studies

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Infant mortality rate at a selected urban, semi-urban and rural areas of Egypt, 1992: a retrospective study.

Gadallah MA, Rady MH, Sadawy M.
A study of infant mortality rate (IMR) in Egypt in 1992 was conducted at three randomly selected areas representing different social classes. IMR per 1000 live births was ranged between 27.1 to 33.5. The differences between male and female IMR were markedly observed with no consensus amongst study areas. Neonatal mortality rate ranged between 4.7 to 11.1 while the post neonatal mortality rate ranged between 18.4 to 23.0. Diarrheal diseases were the most common cause of death amongst infants at all study areas, followed by respiratory illnesses. Inaccurate and under registration were noticed clearly in this work as observed from absence of neonatal deaths in rural areas. Also, in rural areas, prematurity was not recorded as a cause of death. Similarly, neonatal tetanus was not recorded as a cause of death at all study areas.