1: Yohannes M, Haile M, Ghebreyesus TA, Witten KH, Getachew A, Byass P, Lindsay SW.
   Can source reduction of mosquito larval habitat reduce malaria transmission in
   Tigray, Ethiopia?
   PMID: 16359409 [PubMed - indexed for MEDLINE]

2: Manzi M, Zachariah R, Teck R, Buhendwa L, Kazima J, Bakali E, Firmenich P,
   Humblet P.
   High acceptability of voluntary counselling and HIV-testing but unacceptable
   loss to follow up in a prevention of mother-to-child HIV transmission programme
   in rural Malawi: scaling-up requires a different way of acting.
   PMID: 16359404 [PubMed - indexed for MEDLINE]

3: Nnoaham KE.
   European subsidies and developing countries.
   PMID: 16357000 [PubMed - indexed for MEDLINE]

4: Milewski PJ.
   District general hospitals have a future in truly rural areas.
   BMJ. 2005 Dec 17;331(7530):1473. No abstract available.
   PMID: 16356994 [PubMed - indexed for MEDLINE]

5: Asthana S, Gibson A.
   Rationing in response to NHS deficits: rural patients are likely to be affected
   most.
   BMJ. 2005 Dec 17;331(7530):1472. No abstract available.
   PMID: 16356990 [PubMed - indexed for MEDLINE]

6: Lovel HJ, Newby RM, Hillier VF.
   Severe placental malaria and maternal shortness, thinness, and small skeletal
   size in rural Congo: cohort study.
   PMID: 16356980 [PubMed - indexed for MEDLINE]

7: Khan E.
   IMA mercy missions.
   PMID: 16341319 [PubMed - indexed for MEDLINE]
8: Stanley B, Todd A.
Testing for Neisseria gonorrhoeae by nucleic acid amplification testing of chlamydia samples using Roche Cobas Amplicor in a rural area in the north of England does not find more gonorrhoea in primary care.
PMID: 16326859 [PubMed - indexed for MEDLINE]

[The significance of conditions when growing up on the prevalence of atopy in adult Danes]
PMID: 16324440 [PubMed - indexed for MEDLINE]

The role of the pediatrician in rural emergency medical services for children.
PMID: 16322185 [PubMed - indexed for MEDLINE]

Economic assessment of a women's group intervention to improve birth outcomes in rural Nepal.
PMID: 16310555 [PubMed - indexed for MEDLINE]

12: Boost M, Cho P.
High incidence of trachoma in rural areas of Guangxi, China.
PMID: 16310142 [PubMed - indexed for MEDLINE]

13: Schelling E, Wyss K, Bechir M, Moto DD, Zinsstag J.
Synergy between public health and veterinary services to deliver human and animal health interventions in rural low income settings.
PMID: 16308393 [PubMed - indexed for MEDLINE]


Use of intermittent preventive treatment for malaria in pregnancy in a rural area of western Kenya with high coverage of insecticide-treated bed nets.
PMID: 16262738 [PubMed - indexed for MEDLINE]

23: Gordon AL, English M, Tumaini Dzombo J, Karisa M, Newton CR.
Neurological and developmental outcome of neonatal jaundice and sepsis in rural Kenya.
PMID: 16262736 [PubMed - indexed for MEDLINE]

24: Pillai A, Atiya S, Costigan PS.
The incidence of Perthes' disease in Southwest Scotland.
PMID: 16260674 [PubMed - indexed for MEDLINE]

25: Fertman CI, Dotson S, Mazzocco GO, Reitz SM.
Challenges of preparing allied health professionals for interdisciplinary practice in rural areas.
PMID: 16252679 [PubMed - indexed for MEDLINE]

Telepsychiatry program for rural victims of domestic violence.
PMID: 16250820 [PubMed - indexed for MEDLINE]

27: Rathinam X, Kota R, Thiyagar N.
Farmers and formulations--rural health perspective.
PMID: 16250298 [PubMed - indexed for MEDLINE]

28: Kulig JC, Nahachewsky D, Hall BL, Kalischuk RG.
Rural youth violence: it is a public health concern!
PMID: 16238154 [PubMed - indexed for MEDLINE]

29: Iversen L, Hannaford PC, Price DB, Godden DJ.
Is living in a rural area good for your respiratory health? Results from a cross-sectional study in Scotland.


36: Commeyras C, Ndo JR, Merabet O, Kone H, Rakotondrabe FP. 
[Study of access to health care and drugs in Cameroon: 1. Methods and validation] 
PMID: 16207577 [PubMed - indexed for MEDLINE]

37: Veldhuijzen IK, Van Bergen JE, Gotz HM, Hoebe CJ, Morre SA, Richardus JH; PILOT CT Study Group. 
Reinfections, persistent infections, and new infections after general population screening for Chlamydia trachomatis infection in the Netherlands. 
PMID: 16205300 [PubMed - indexed for MEDLINE]

38: Altpeter M, Mitchell J, Pennell J. 
Advancing social workers' responsiveness to health disparities: the case of breast cancer screening. 
PMID: 16190298 [PubMed - indexed for MEDLINE]

Tick species and tick-borne infections identified in population from a rural area of Spain. 
PMID: 16181517 [PubMed - indexed for MEDLINE]

40: Letrilliart L, Ragon B, Hanslik T, Flahault A. 
Lyme disease in France: a primary care-based prospective study. 
PMID: 16181516 [PubMed - indexed for MEDLINE]

Rubella and measles seroprevalence among women of childbearing age, Argentina, 2002. 
PMID: 16181506 [PubMed - indexed for MEDLINE]

42: Chen MY, James K, Hsu LL, Chang SW, Huang LH, Wang EK.
Health-related behavior and adolescent mothers.
PMID: 16150009 [PubMed - indexed for MEDLINE]

43: Rivera MM, Chavez A, Rosales R, Melo V.
Cancer frequency in poor rural communities consuming a very limited diet.
PMID: 16145261 [PubMed - indexed for MEDLINE]

44: Appel SJ, Giger JN, Davidhizar RE.
PMID: 16141776 [PubMed - indexed for MEDLINE]

A chronic disease outreach program for Aboriginal communities.
PMID: 16108977 [PubMed - indexed for MEDLINE]

Diabetes and hypertension in pregnancy in a rural community of Bangladesh: a population-based study.
PMID: 16108860 [PubMed - indexed for MEDLINE]

47: Cicero AF, Dormi A, Nascetti S, Panourgia MP, Grandi E, D'Addato S, Gaddi A.
Relative role of major risk factors for Type 2 diabetes development in the historical cohort of the Brisighella Heart Study: an 8-year follow-up.
Diabet Med. 2005 Sep;22(9):1263-6.
PMID: 16108859 [PubMed - indexed for MEDLINE]

48: Griffiths P, Bentley M.
Women of higher socio-economic status are more likely to be overweight in Karnataka, India.
PMID: 16077746 [PubMed - indexed for MEDLINE]

49: Adair LS, Popkin BM.
Are child eating patterns being transformed globally?


ABSTRACTS


Can source reduction of mosquito larval habitat reduce malaria transmission in Tigray, Ethiopia?

Yohannes M, Haile M, Ghebreyesus TA, Witten KH, Getachew A, Byass P, Lindsay SW.

Mekelle University, Mekelle, Ethiopia. fisah@freemail.et

The development of irrigation schemes by dam construction has led to an increased risk of malaria in Tigray, Ethiopia. We carried out a pilot study near
a microdam to assess whether environmental management could reduce malaria transmission by Anopheles arabiensis, the main vector in Ethiopia. The study took place in Deba village, close to a dam; Maisheru village, situated 3-4 km away from the dam, acted as a control. Baseline entomological and clinical data were collected in both villages during the first 12 months. Source reduction, involving filling, draining and shading of potential mosquito-breeding habitats was carried out by the community of Deba in the second year and routine surveillance continued in both villages during the second year. Anopheles arabiensis was highly anthropophilic (Human Blood Index=0.73), biting early in the night before people went to bed. The major breeding habitats associated with the dam were areas of seepage at the dam base (28%), leaking irrigation canals (16%), pools that formed along the bed of streams from the dam (13%), and man-made pools (12%). In the pre-intervention year, 5.9-7.2 times more adult vectors were found in the dam village compared with the control village. There was a 3.1% higher prevalence of an enlarged spleen in children under 10 years in the dam village than in the control village during the pre-intervention period, but no statistically significant difference was found in the incidence of falciparum malaria between the two villages during the same period. Source reduction was associated with a 49% (95% CI=46.6-50.0) relative reduction in An. arabiensis adults in the dam village compared with the pre-intervention period. There were very few cases of malaria during the intervention period in both villages making it impossible to judge whether malaria incidence had been reduced. These preliminary findings suggest that in areas of low intensity transmission community-led larval control may be a cheap and effective method of controlling malaria. Further, large-scale studies are needed to confirm these findings.

PMID: 16359409 [PubMed - indexed for MEDLINE]
High acceptability of voluntary counselling and HIV-testing but unacceptable loss to follow up in a prevention of mother-to-child HIV transmission programme in rural Malawi: scaling-up requires a different way of acting.


Medecins sans Frontieres—Luxembourg, Thyolo district, Luxembourg, Malawi.
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SETTING: Thyolo District Hospital, rural Malawi.

OBJECTIVES: In a prevention of mother-to-child HIV transmission (PMTCT) programme, to determine: the acceptability of offering 'opt-out' voluntary counselling and HIV-testing (VCT); the progressive loss to follow up of HIV-positive mothers during the antenatal period, at delivery and to the 6-month postnatal visit; and the proportion of missed deliveries in the district.

DESIGN: Cohort study.

METHODS: Review of routine antenatal, VCT and PMTCT registers. RESULTS: Of 3136 new antenatal mothers, 2996 [96%, 95% confidence interval (CI): 95-97] were pre-test counselled, 2965 (95%, CI: 94-96) underwent HIV-testing, all of whom were post-test counselled. Thirty-one (1%) mothers refused HIV-testing. A total of 646 (22%) individuals were HIV-positive, and were included in the PMTCT programme. Two hundred and eighty-eight (45%) mothers and 222 (34%) babies received nevirapine. The cumulative loss to follow up (n=646) was 358 (55%, CI: 51-59) by the 36-week antenatal visit, 440 (68%, CI: 64-71) by delivery, 450 (70%, CI: 66-73) by the first postnatal visit and 524 (81%, CI: 78-84) by the 6-month postnatal visit. This left just 122 (19%, CI: 16-22) of the initial cohort still in the programme. The great majority (87%) of deliveries occurred
at peripheral sites where PMTCT was not available.

CONCLUSIONS: In a rural district hospital setting, at least 9 out of every 10 mothers attending antenatal services accepted VCT, of whom approximately one-quarter were HIV-positive and included in the PMTCT programme. The progressive loss to follow up of more than three-quarters of this cohort by the 6-month postnatal visit demands a 'different way of acting' if PMTCT is to be scaled up in our setting.

PMID: 16359404 [PubMed - indexed for MEDLINE]


Comment on:
    BMJ. 2005 Dec 3;331(7528):1333-6.

European subsidies and developing countries.

Nnoaham KE.

Publication Types:
    Comment
    Letter

PMID: 16357000 [PubMed - indexed for MEDLINE]


Comment on:
    BMJ. 2005 Dec 3;331(7528):1331-3.

District general hospitals have a future in truly rural areas.

Milewski PJ.

Publication Types:
    Comment
    Letter

PMID: 16356994 [PubMed - indexed for MEDLINE]

5: BMJ. 2005 Dec 17;331(7530):1472.

Comment on:
    BMJ. 2005 Dec 3;331(7528):1290.

Rationing in response to NHS deficits: rural patients are likely to be affected
most.

Asthana S, Gibson A.

Publication Types:
  Comment
  Letter

PMID: 16356990 [PubMed - indexed for MEDLINE]


Severe placental malaria and maternal shortness, thinness, and small skeletal size in rural Congo: cohort study.

Lovel HJ, Newby RM, Hillier VF.

WHO Collaborating Centre for Primary Care, School of Primary Care, University of Manchester, Rusholme Health Centre, Manchester M14 5NP. hlovel04@yahoo.co.uk

PMID: 16356980 [PubMed - indexed for MEDLINE]


IMA mercy missions.

Khan E.

Publication Types:
  Letter

PMID: 16341319 [PubMed - indexed for MEDLINE]


Testing for Neisseria gonorrhoeae by nucleic acid amplification testing of chlamydia samples using Roche Cobas Amplicor in a rural area in the north of England does not find more gonorrhoea in primary care.

Stanley B, Todd A.

Publication Types:
  Letter

PMID: 16326859 [PubMed - indexed for MEDLINE]

INTRODUCTION: The prevalence of atopy in adults depends on both hereditary and environmental factors. The influence of environmental factors is explained in the "hygiene hypothesis" by maturational changes in the immunological system in response to limited microbiologic challenges in early life. Several studies have indicated protective effects of varying conditions in early life, e.g., living on a farm and in particular with livestock. This study analyses this problem in a Danish population. METHODS: This cross-sectional study used the European Community Respiratory Health Survey (ECRHS) protocol. A screening questionnaire concerning asthma, asthma-related symptoms and nasal allergy supplemented by questions about environmental factors was distributed to 10,000 randomly chosen individuals, 20 to 44 years of age, in five Danish counties. RESULTS: The questionnaire was answered by 7,271 individuals (72.7%). The prevalence of asthma and nasal allergy in adults was independent of growing up in the city or the country, but a significant inverse association was seen when growing up in the country in proximity to livestock. This effect remained after controlling for different hereditary and environmental factors. DISCUSSION: The results of this population-based study are consistent with the results from similar international studies. This study demonstrates that growing up in the country with contact with livestock protects against the development of asthma and nasal allergy in adults.
The role of the pediatrician in rural emergency medical services for children.


In rural America, pediatricians can play a key role in the development, implementation, and ongoing supervision of emergency medical services for children. Pediatricians may represent the only source of pediatric expertise for a large region and are a vital resource for rural physicians (eg, general and family medicine, emergency medicine), other rural health care professionals (physician assistants, nurse practitioners, emergency medical technicians), and local emergency medical services medical directors. They can provide education about management and prevention of pediatric illness and injury; appropriate equipment for the acutely ill or injured child; and acute, chronic, and rehabilitative care. In addition to providing clinical expertise, the pediatrician may be involved in quality assurance, clinical protocol development, and advocacy and may serve as a liaison between emergency medical services and other entities working with children (eg, school nurses, child care centers, athletic programs, and programs for children with special health care needs).

Economic assessment of a women's group intervention to improve birth outcomes in rural Nepal.

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joyborghi@lshtm.ac.uk

We did a cost-effectiveness analysis alongside a cluster-randomised controlled trial of a participatory intervention with women's groups to improve birth outcomes in rural Nepal. The average provider cost of the women's group intervention was US0.75 dollars per person per year (0.90 dollars with health-service strengthening) in a population of 86,704. The incremental cost per life-year saved (LYS) was 211 dollars (251 dollars), and expansion could rationalise on start-up costs and technical assistance, reducing the cost per LYS to 138 dollars (179 dollars). Sensitivity analysis showed a variation from 83 dollars to 263 dollars per LYS for most variables. This intervention could provide a cost-effective way of reducing neonatal deaths.

PMID: 16310555 [PubMed - indexed for MEDLINE]


Comment on:

High incidence of trachoma in rural areas of Guangxi, China.

Boost M, Cho P.

Publication Types:
Comment
Letter

PMID: 16310142 [PubMed - indexed for MEDLINE]


Synergy between public health and veterinary services to deliver human and animal health interventions in rural low income settings.

Schelling E, Wyss K, Bechir M, Moto DD, Zinsstag J.

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Underrecognition of the severity of asthma and undertreatment of asthma in a rural area of Japan.


Third Department of Internal Medicine, Tottori University, Yonago, and Department of Respiratory Medicine, San-in Rosai Hospital, Japan. tom0223@grape.med.tottori-u.ac.jp

BACKGROUND AND AIM: Revised guidelines were released in Japan in 2003 for the assessment, treatment, and management of adult asthmatics, and similar guidelines for child asthmatics were released in 2002. We reassessed the severity and possible undertreatment of asthma according to these guidelines in stable asthmatics. METHODS: We reviewed medical records of 861 well-controlled asthmatic patients who, in April through June 2004 were cared for by 47 pulmonologists at 29 medical centers and 13 asthma clinics in a rural community in the San-in area of Japan. The physician obtained completed medical records about their symptoms and current treatment of the subjects, 726 adult and 135 children (aged 6 years or older) who were in stable condition and had had no exacerbations in the previous 3 months. The severity of asthma and current treatment for each patient were assessed according to the newly revised Japanese guidelines for the assessment, treatment, and management of adult and child asthmatics. RESULTS: In adult and child asthmatics, the percentage of predicted
forced expiratory volume at 1 second (FEV1.0) was smaller and has a narrower distribution range than the percentage of predicted peak expiratory flow (PEF).

When the severity of asthma was classified according to symptoms alone, 50% and 35% of those classified as mildly asthmatics patients with adults and children, respectively, had moderate to severe airflow limitation. Inhaled corticosteroids were prescribed to 90.6% of adult and 14.9% of child patients. When we compared the treatments that patients were actually receiving against the optimal treatments indexed according to a combined symptoms-FEV1.0 classification, we found that 49% of adult asthmatics were overtreated, 21% were properly treated, and 30% were undertreated. Among children, the respective percentages were 35%, 25%, and 40%.

CONCLUSION: In well-controlled adult and child asthmatics, the severity of asthma is poorly judged when symptoms alone are considered. We suggest that the severity of asthma should be assessed through a combination of symptoms and the measurement of FEV1.0 during office visits. We also suggest that the proper dose of inhaled steroid needed to maintain stable conditions should be judged according to this combined symptoms-FEV1.0 classification.

Publication Types:
Multicenter Study

PMID: 16304712 [PubMed - indexed for MEDLINE]


Responding to the threat of chronic diseases in India.
Srinath Reddy K, Shah B, Varghese C, Ramadoss A.

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At the present stage of India's health transition, chronic diseases contribute to an estimated 53% of deaths and 44% of disability-adjusted life-years lost.
Cardiovascular diseases and diabetes are highly prevalent in urban areas. Tobacco-related cancers account for a large proportion of all cancers. Tobacco consumption, in diverse smoked and smokeless forms, is common, especially among the poor and rural population segments. Hypertension and dyslipidaemia, although common, are inadequately detected and treated. Demographic and socioeconomic factors are hastening the health transition, with sharp escalation of chronic disease burdens expected over the next 20 years. A national cancer control programme, initiated in 1975, has established 13 registries and increased the capacity for treatment. A comprehensive law for tobacco control was enacted in 2003. An integrated national programme for the prevention and control of cardiovascular diseases and diabetes is under development. There is a need to increase resource allocation, coordinate multisectoral policy interventions, and enhance the engagement of the health system in activities related to chronic disease prevention and control.

PMID: 16291069 [PubMed - indexed for MEDLINE]

Looking for Betty.
Olle-Goig JE.
St. Francis Hospital, Buluba, Uganda. olleuganda@yahoo.com

PMID: 16287800 [PubMed - indexed for MEDLINE]

Association between colonic screening, subject characteristics, and stage of colorectal cancer.
Fazio L, Cotterchio M, Manno M, McLaughlin J, Gallinger S.
Department of Public Health Sciences, University of Toronto, Toronto, Ontario, Canada.
OBJECTIVES: Colorectal cancer remains a significant cause of mortality and morbidity in North America. Colorectal cancer survival is highly dependent on stage at diagnosis, therefore it is important to identify factors related to stage. This study evaluated the association between subject factors (e.g., colonic screening, family history) and stage of colorectal cancer at diagnosis.

METHODS: Population-based colorectal cancer cases recruited by the Ontario Familial Colon Cancer Registry between 1997 and 1999 were staged according to the tumor-nodal-metastasis (TNM) staging system and classified as early (TNM I/II) or late (TNM III/IV) stage. Epidemiologic information and stage was available for 768 cases. Multivariate logistic regression was used to obtain odds ratios (OR) estimates. RESULTS: Having had screening endoscopy reduced the risk of late stage diagnosis (OR = 0.46, 95% CI 0.22–0.98). Being older (>45 yr) was associated with a reduced risk of late stage cancer (OR = 0.36, 95% CI 0.18–0.74), as was having a first degree relative with colorectal cancer (OR = 0.66, 95% CI 0.46–0.95). Rural residence (OR = 1.48, 95% CI 1.01–2.17) and non-white ethnicity (OR = 3.34, 95% CI 1.20–9.36) were associated with an increased risk of late stage cancer. CONCLUSIONS: Several factors are independently associated with late stage colorectal cancer. Colorectal cancer screening awareness and education programs need to consider targeting persons most likely to present with late stage colorectal cancer.

PMID: 16279911 [PubMed – indexed for MEDLINE]


Panapasa SV, Maharaj JC.

Population Studies Center, Institute for Social Research, University of Michigan, Ann Arbor, Michigan, USA. panapasa@umich.edu
This paper examines the oral health status of older adults in Fiji to determine the risks of dental disabilities. Using cross-sectional data collected in 1985 and 1999, logistic regression models are used to measure the effect of select demographic, socioeconomic and health variables on difficulty with chewing. While the general picture for the older persons is quite positive, the largest concern is the striking increase in poverty as a predictor for our dependent variable.

PMID: 16276939 [PubMed - indexed for MEDLINE]


Greer MH, Tengan SL, Hu KI, Takata JT.

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Utilizing a standardized oral health assessment tool, public school children ages 5 through 9 were evaluated Statewide in 1989 and 1999. In both samples, it was demonstrated that Asian & Pacific Islander children (as a group), by contrast with Caucasian, African American or Hispanic children, suffered from disproportionately high rates of dental caries, were more likely to have unmet treatment needs and less likely to utilize dental sealants. Significant variance among oral health/ oral disease indicators was found among ethnic and regional groups and all Hawaii cohorts were found to have poorer oral health indicators by contrast with U.S. national findings. Data was not found to follow any particular pattern with regards to urban vs. rural settings. This report shows the value of considering a variety of oral health indicators in evaluating the health of a community. More research needs to be done in evaluating the influence of socioeconomic status and cultural beliefs and practices on the oral
health of young children in Hawai'i.

PMID: 16276937 [PubMed - indexed for MEDLINE]


A new evaluation tool for admissions.

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PMID: 16262815 [PubMed - indexed for MEDLINE]


Integrating insecticide-treated bednets into a measles vaccination campaign achieves high, rapid and equitable coverage with direct and voucher-based methods.


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Population coverage of insecticide-treated nets (ITNs) in Africa falls well below the Abuja target of 60% while coverage levels achieved during vaccination campaigns in the same populations typically exceed 90%. Household (HH) cost of ITNs is an important barrier to their uptake. We investigated the coverage, equity and cost of linking distribution of free ITNs to a measles vaccination campaign. During a national measles vaccination campaign in Zambia, children in four rural districts were given a free ITN when they received their measles vaccination. In one urban district, children were given a voucher, which could be redeemed for a net at a commercial distribution site. About 1700 HHs were asked whether they received vaccination and an ITN during a measles campaign, as well as questions on assets (e.g. type roofing material or bicycle ownership) to assess HH wealth. Net ownership was calculated for children in each wealth
quintile. In the rural areas, ITN coverage among children rose from 16.7% to 81.1% and the equity ratio from 0.32 to 0.88 and in the urban area from 50.7% to 76.2% (equity ratio: 0.66-1.19). The operational cost per ITN delivered was dollar 0.35 in the rural area with direct distribution and $1.89 in the urban areas with voucher distribution. Mass distribution of ITNs through vaccination campaigns achieves rapid, high and equitable coverage at low cost.

PMID: 16262740 [PubMed - indexed for MEDLINE]


Use of intermittent preventive treatment for malaria in pregnancy in a rural area of western Kenya with high coverage of insecticide-treated bed nets.

van Eijk AM, Blokland IE, Slutsker L, Odhiambo F, Ayisi JG, Bles HM, Rosen DH, Adazu K, Lindblade KA.

Kenya Medical Research Institute, Centre for Vector Biology and Control Research, Kisumu, Kenya. AMvanEijk@yahoo.com

Kenya established intermittent preventive treatment (IPT) with sulfadoxine-pyrimethamine (SP) for malaria in pregnancy as national policy in 1998. We assessed the coverage of IPT among women who had recently delivered in a rural area of western Kenya with perennial malaria transmission and high coverage with insecticide treated nets (ITNs) through a cross-sectional, community-based survey in December 2002. Antenatal clinic (ANC) attendance was high (89.9% of the 635 participating women); 77.5% of attendees visited an ANC before the third trimester and 91.9% made more than one visit. Delivery of SP by the ANC was reported by 19.1% of all women but only 6.8% reported receiving more than one dose. Given the high rate of use of ANC services, if SP were given at each visit after the first trimester, the potential coverage of IPT (two doses
of SP) would be 80.3% in this study population. ITNs were used by 82.4% of women during pregnancy, and almost all mothers (98.5%) who slept under an ITN shared the nets with their newborns after delivery. Women who thought malaria in pregnancy caused foetal problems were more likely to have used an ITN (adjusted odds ratio [AOR] 1.6, 95% confidence interval [CI] 1.0-2.4), and to have visited ANC more than once (AOR 2.4, 95% CI 1.2-4.7) compared to women who thought malaria in pregnancy was either not a problem or caused problems for the mother only. These findings illustrate the need for improved IPT coverage in this rural area. Identification and removal of the barriers to provision of IPT during ANC visits can help to increase coverage. In this area of Kenya, health messages stressing that foetal complications of malaria in pregnancy may occur in the absence of maternal illness may improve the demand for IPT.

PMID: 16262738 [PubMed - indexed for MEDLINE]


Neurological and developmental outcome of neonatal jaundice and sepsis in rural Kenya.

Gordon AL, English M, Tumaini Dzombo J, Karisa M, Newton CR.

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Neonatal jaundice (NJ) and sepsis are common causes of neonatal mortality in sub-Saharan Africa, but little is known about the long-term morbidity in this setting. This study aimed to describe the neurological and developmental sequelae of severe neonatal hyperbilirubinaemia and neonatal sepsis (NS) in a district hospital in rural Kenya. Twenty-three term infants with NJ [total serum bilirubin (TSB) >300 mumol/l] and 24 infants with a history of NS were
identified from hospital records. These children were compared to 40 children from the community (CC) without neonatal problems. At ages 18-32 months, the children's neurological, motor and developmental status were assessed, and blood groups of the NJ and NS subjects and their mothers were determined. Ten (43%) of the NJ subjects were unable to sit and/or stand independently. The NJ subjects had significantly more neurological, motor and developmental difficulties and caused greater maternal concern than the CCs. Five (21%) of the NJ subjects had possible blood group incompatibility. The NS subjects had significantly more motor and eye-hand difficulties and maternal concerns expressed than the CCs. Severe NJ in term infants (of mainly non-haemolytic origin) was associated with a high prevalence of neurological and developmental sequelae at ages 18-32 months. The NS is also associated with neuro-developmental sequelae, but the pattern is different to those seen in NJ. Since NS is common in resource poor countries, this may be an important cause of neuro-developmental impairment in children living in this setting.

PMID: 16262736 [PubMed - indexed for MEDLINE]


Comment in:


The incidence of Perthes' disease in Southwest Scotland.

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We have investigated the annual incidence of Perthes' disease in Dumfries and Galloway (Southwest Scotland), in relation to the population density and socio-economic status. The incidence of Perthes' disease in rural Scotland is comparable with that in urban areas (15.4 per 100,000). There was a direct association between the incidence of Perthes' disease and deprivation scores,
with the highest incidence in the most deprived areas. A higher incidence of Perthes' disease was noted in areas with a lower population density compared with those with a higher density. We found no correlation between population density and deprivation scores for individual electoral wards within the region.

Publication Types:
Review

PMID: 16260674 [PubMed - indexed for MEDLINE]


Challenges of preparing allied health professionals for interdisciplinary practice in rural areas.

Fertman CI, Dotson S, Mazzocco GO, Reitz SM.

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Meeting the health needs of individuals in rural communities involves addressing the challenges of complex multifaceted health problems, limited local health resources and services, isolation, and distance. Interdisciplinary collaboration can create solutions to health care problems that transcend conventional, discipline-specific methods, procedures, and techniques. This paper reports on the four-pronged approach of the Western Maryland Area Health Education Center used to prepare allied health students to be interdisciplinary team members in rural areas. It describes the development of four interdisciplinary instructional team member training venues (in-class instruction, Web-based modules, service-learning programs, and faculty development workshops) that integrate opportunities to develop and practice interdisciplinary health promotion skills in rural communities. Challenges to implementing the model are described, including developing faculty and student training participation,
integrating training venues into existing programs at participating institutions, and designing a unified program evaluation.

PMID: 16252679 [PubMed – indexed for MEDLINE]


Telepsychiatry program for rural victims of domestic violence.

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Domestic violence is a significant public health problem and is correlated with serious mental and physical disorders. Victims' fear and isolation seriously limit access to psychiatric evaluation and treatment. Telemedicine provides a means to overcome these obstacles. This article describes a telemedicine program that provides psychiatric screening, evaluation, treatment, and referral for ongoing care to clients of a rural women's crisis center. Psychiatric evaluation and treatment were provided to a rural women's shelter program using telepsychiatry. The shelter program had difficulty accessing traditional mental health service. All new clients entering the program were screened for mental health problems. Those requiring further evaluation received a physical examination with medical history and initial psychological interview on site, followed by psychiatric evaluation by videoconference. Appropriate treatment was initiated, and referral for ongoing psychiatric care through the local community mental health clinic was arranged. Of the 38 women referred for mental health services by clinic staff, 35 completed a psychiatric evaluation using telepsychiatry and 31 entered treatment. The most commonly identified disorders were anxiety and major affective disorders, followed by substance use disorders. Telepsychiatry can provide rapid crisis intervention and effective mental health
services to victims of domestic violence in a rural setting.

PMID: 16250820 [PubMed - indexed for MEDLINE]


Farmers and formulations--rural health perspective.

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Conventional farming demands excessive use of chemicals in the form of synthetic fertilizers and pesticides, confirming to the norms of Green Revolution. Farmers in general, specifically in the developing countries resort to injudicious and excessive use of pesticides which is linked to the illiteracy and poverty of the rural farming community. Their overriding concern for profitable agriculture, has rendered the health of the farmers at a greater risk of developing dreadful maladies including various type of cancers, reproductive disorders, respiratory, dermal, and neuropsychological problems etc. The possible means of reducing the health risks are discussed, including the global effort to regulate the manufacture, transport and use of highly toxic pesticides. Slow and programmed transition to alternative agriculture and strengthening of farmers' knowledge on health, ecosystem and environment will prove effective.

Publication Types:
Review

PMID: 16250298 [PubMed - indexed for MEDLINE]


Rural youth violence: it is a public health concern!

Kulig JC, Nahachewsky D, Hall BL, Kalischuk RG.
Youth violence is a significant issue for public health because of the potential for long-term impacts on individuals, families and communities. Limited exposure to violence is seen as a component of healthy living. However, there is limited understanding of violence from a public health perspective within rural communities. Rural refers to those communities with a population less than 10,000 outside the main commuting zone of a large urban area. Population health approaches, including the social determinants of health, are well supported by public health officials. Generating information about rural youth violence from a Canadian perspective would add to our understanding of these social determinants while providing guidance for policy and program development.

Current understandings of youth violence are limited to an urban, and oftentimes, American perspective. An ongoing two-phase Canadian study on rural youth violence included qualitative interviews with 52 youth and the completion of a questionnaire that had been developed from the qualitative responses. The questionnaire has been completed by a larger sample of rural youth. The findings generated from this ongoing study will be useful in linking violence with social factors that impact health and thereby guide population health programs and policies. In this way, the role of public health to develop policies and implement programs will be directly influenced by evidence while addressing an ongoing public health concern.

PMID: 16238154 [PubMed - indexed for MEDLINE]


Is living in a rural area good for your respiratory health? Results from a cross-sectional study in Scotland.

Iversen L, Hannaford PC, Price DB, Godden DJ.
STUDY OBJECTIVES: We aimed to investigate the epidemiology of self-reported chronic respiratory disease throughout Scotland, and to explore the relationship between quality of life and geographic location in those reporting disease.

DESIGN: A cross-sectional study. Self-reported data on age, gender, socioeconomic factors, smoking habits, selected illnesses (major respiratory and atopic diseases, and other major conditions), respiratory symptoms, use of medicines and health services, and quality of life were collected using a postal questionnaire. PARTICIPANTS: A total of 4,560 adults registered with 1 of 57 family practices (22 rural and 35 urban) throughout Scotland. RESULTS: The response rate was 60%. Following adjustment for potential confounders, participants from rural areas reported a significantly lower prevalence of any chest illness (adjusted odds ratio [OR], 0.72; 95% confidence interval [CI], 0.58 to 0.91), asthma (adjusted OR, 0.59; 95% CI, 0.46 to 0.76), and eczema/dermatitis (adjusted OR, 0.67; 95% CI, 0.52 to 0.87). Rural location was less likely than urban location to be associated with the reporting of persistent cough and phlegm and different symptoms (types of breathlessness and wheeze) indicative of asthma. No difference in prevalence was found for other respiratory problems. Participants from rural areas reporting COPD or emphysema, or cough or phlegm symptoms had significantly better quality of life scores than their urban counterparts. CONCLUSIONS: In this study, living in a rural area was associated with a lower prevalence of asthma but not other chronic respiratory disorders, and a lower prevalence of some respiratory symptoms (including wheeze). Although the prevalence of COPD or emphysema did not differ between
rural and urban areas, rural residency appeared to be associated with better health status among subjects with these conditions.

Publication Types:
Multicenter Study

PMID: 16236855 [PubMed - indexed for MEDLINE]


Cancer risk factors of Vietnamese Americans in rural south Alabama.
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PURPOSE: To identify aggregate-specific cancer risk factors of Vietnamese Americans in south Alabama and present a comparison with available national data and Healthy People 2010 targets. DESIGN: Cross-sectional survey. METHODS: A convenience sample of 284 Vietnamese community residents 18 years and over completed an investigator-designed questionnaire. Data were analyzed using descriptive correlational analysis. FINDINGS: Aggregate-specific cancer risk factors included high prevalence of hepatitis, high smoking and drinking rates in men, extended sun exposure without protection, knowledge deficit of cancer and cancer screenings, and low cancer screening rates. Educational level was significantly related to many cancer risk factors. CONCLUSIONS: Significant cancer risk factors exist in the target population in comparison to available national data and Healthy People 2010 targets. More focused cancer prevention and early detection efforts should be initiated for this underserved population. Future research is needed to (a) determine the effect of acculturation on cancer risk factors and (b) develop culturally appropriate interventions to improve the effectiveness of cancer prevention and early detection interventions in this subgroup of Asian Americans.
Epidemiological evaluations of the efficacy of slow-released praziquantel-medicated bars for dogs in the prevention and control of cystic echinococcosis in man and animals.

Wei J, Cheng F, Qun Q, Nurbek, Xu SD, Sun LF, Han XK, Muhan, Han LL, Irixiatii, Jie P, Zhang KJ, Islayin, Chai JJ.

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To assess the epidemiological efficacy of type SRP III slow-released praziquantel-medicated bars for dogs in the prevention and control of cystic echinococcosis in man and livestock, praziquantel-medicated bars were implanted subcutaneously in over 90% of dogs in villages in north Xinjiang, China, where cystic echinococcosis is highly endemic. After implantation, infection rate of Echinococcus granulosus in dogs, specific antibodies in children and prevalence of echinococcosis in one-year-old lambs were observed for 3 years. Coproantigen of E. granulosus was positive in 41.2% of the dogs at the start of experiment. In the second and third year after medicated-bar implantation, coproantigen was undetectable in any dogs examined, while 3.0% of dogs were positive at the end of the fourth year. The antibody positive rate in 7-year-old pupils, that was 41.2% before the experiment, declined gradually and it was 5.4% in the fourth year, while children in the non-intervention control area showed 30.6% seropositivity. The prevalence of hydatid disease in children aged 7-16 years also declined significantly. The prevalence of hydatidosis in lambs one year of age was 44.8% in the first year, dropping to 10.7% in the fourth year, while in the non-intervention control area the level of infection was 46.4%. These
results demonstrated not only that the slow released praziquantel-medicated bars efficiently blocked reinfection in dogs at least for 2 years, but also the measure was effective in preventing transmission of cystic echinococcosis to both man and livestock.

PMID: 16231860 [PubMed - indexed for MEDLINE]


Associations of pesticides, HCV, HBV, and hepatocellular carcinoma in Egypt.


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The rate of hepatocellular carcinoma (HCC) is increasing in Egypt where the major risk factors are chronic infections with hepatitis B and C viruses (HBV and HCV). A major segment of the population is employed in agriculture, raising the possibility that exposure to pesticides is an additional risk factor for HCC. The objective of this study is to investigate pesticides as environmental risk factors for HCC while taking into account viral risk factors. We conducted a case-control study of 236 subjects with confirmed HCC recruited from the National Cancer Institute, Cairo University, Egypt, and 236 controls matched on sex, age group and urban-rural status recruited from orthopedic department, Cairo University Hospital, Egypt. Patients who agreed to participate signed a consent form, answered a questionnaire and gave a blood sample for hepatitis virus testing. The manuals of the Ministry of Agriculture for approved use and type of pesticides since 1965 were linked to the questionnaire data for types of crops and pests that the subject had to combat, to attribute specific pesticides that were used by each subject. Subjects also reported duration of the exposure
Case-control comparisons in these data were stratified by sex, age group, and urban vs. rural residence. Data were analyzed using unconditional logistic regression models adjusting for age, HCV RNA, and current hepatitis B infection. Among rural males, the adjusted odds ratio (OR) for organophosphorus compounds was 2.7 (95% CI = 1.3-5.3) and for carbamates it was 2.9 (95% CI = 1.4-5.8). No statistically significant associations between HCC and pesticides were observed for urban males or for females. As expected, the strongest risk factors for HCC in this study were HCV RNA (OR = 16-17) and current HBV infection (OR = 27-28). This study therefore suggests that exposures to organophosphorus and carbamate pesticides are additive risk factors to current HCV and HBV infection among rural males. Future investigation should address the possible hepatocarcinogenicity of pesticides using biomarkers of exposure and other techniques to better estimate dose-response relationships.

PMID: 16217918 [PubMed - indexed for MEDLINE]


Positive association of farm or rural residence with acute myeloid leukemia incidence in a cohort of older women.

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The etiology of acute myeloid leukemia (AML) is relatively unknown. Incidence rates are highest in the agricultural Midwest region compared with other regions of the United States. Many studies have examined the relationship between farming and leukemia, but most have mainly focused on men. We examined the potential association between farm or rural residence and AML in the Iowa
Women's Health Study. In 1986, 37,693 women who were free of prior cancer completed a lifestyle and health questionnaire, which included a question on the place of residence. Women were subsequently followed until 2002 for cancer incidence; 79 women developed AML during the time period. Women who lived on a farm at baseline were more likely (relative risk, 1.91; 95% confidence interval, 1.19-3.05) to develop AML compared with women who did not live on a farm. Further, women who reported living on a farm or in a rural area were twice as likely (relative risk, 2.38; 95% confidence interval, 1.33-4.26) to develop AML compared with women who lived in a city with a population of >10,000 people. These results provide evidence that women who live on farms or rural areas are at an increased risk of AML.

PMID: 16214930 [PubMed - indexed for MEDLINE]


Psychosocial effects of the 2001 UK foot and mouth disease epidemic in a rural population: qualitative diary based study.

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OBJECTIVES: To understand the health and social consequences of the 2001 foot and mouth disease epidemic for a rural population. DESIGN: Longitudinal qualitative analysis. SETTING: North Cumbria, the worst affected area in Britain. SAMPLE: Purposive sample of 54 respondents divided in six demographically balanced rural occupational and population groups. MAIN OUTCOME MEASURES: 3071 weekly diaries contributed over 18 months; 72 semistructured interviews (with the 54 diarists and 18 others); 12 group discussions with diarists RESULTS: The disease epidemic was a human tragedy, not just an animal
one. Respondents' reports showed that life after the foot and mouth disease epidemic was accompanied by distress, feelings of bereavement, fear of a new disaster, loss of trust in authority and systems of control, and the undermining of the value of local knowledge. Distress was experienced across diverse groups well beyond the farming community. Many of these effects continued to feature in the diaries throughout the 18 month period. CONCLUSIONS: The use of a rural citizens' panel allowed data capture from a wide spectrum of the rural population and showed that a greater number of workers and residents had traumatic experiences than has previously been reported. Recommendations for future disaster management include joint service reviews of what counts as a disaster, regular NHS and voluntary sector sharing of intelligence, debriefing and peer support for front line workers, increased community involvement in disposal site or disaster management, and wider, more flexible access to regeneration funding and rural health outreach work.

PMID: 16214809 [PubMed - indexed for MEDLINE]


Rodent control operations against zoonotic cutaneous leishmaniasis in rural Iran.


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BACKGROUND: Zoonotic cutaneous leishmaniasis (ZCL) is a serious and increasing public health problem in many rural areas of Iran. Previous studies showed that rodent control operations are effective in destroying rodents and reducing the incidence of ZCL on a small scale and in special circumstances. The objective of
this study was to determine suitable timing for rodent control operations in reducing the incidence of ZCL in an endemic area in Badrood, Iran. METHODS: We conducted rodent control operations by baiting rodent holes using zinc phosphide once a month in May, June, July and September in 1997 within a 500-meter circle of houses in the intervention area. From 1999 to 2002, the numbers of active rodent holes were counted in May and October in the intervention and control areas. When the numbers of rodent holes increased to 30% or more of the number before the first baiting in May 1997, holes in the intervention area were baited again with zinc phosphide in the intervention area; no baiting was done in the control village. Case findings were done by house-to-house visits once every season during 2000 to 2002. RESULTS: Changes in the number of rodent holes over time in the intervention and control villages were statistically significant (P<0.000001). There were also significant differences in the incidence of ZCL between the intervention and control villages (P<0.005) during 2000 to 2002. The incidence of ZCL was unchanged in the years 2000 and 2001, but increased in one village in 2002 after an increase in the number of rodent holes. CONCLUSION: We suggest that rodent control operations using zinc phosphide be done within a 500-meter circle of houses once every two years before the beginning of the active season of sandflies, which begins in late April.

PMID: 16212124 [PubMed - indexed for MEDLINE]


[Study of access to health care and drugs in Cameroon: 1. Methods and validation]

[Article in French]

Commeyras C, Ndo JR, Merabet O, Kone H, Rakotondrabe FP.

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During the 1980s, an economic depression and the concomitant decrease in the national health budget modified the population's health behavior. Improvement of the economy since the late 1990s makes it possible to renew the national health policy. To prepare the highly indebted and poor countries' program (HIPC), the Minister of Health and its partners commissioned a survey to measure the population's real access to health care and the factors that determine this accessibility and to propose concrete corrective actions. To fulfill these objectives, the steering committee decided to analyze health care demand, through a national population survey, and supply capacity, through a national survey of pharmacies and other drug dispensers. A survey of persons using medications will also be conducted (Fig.1). Focusing on this component of health care is justified by these findings: 95% of persons feeling ill buy drugs, whereas only 31% consult a physician or other healthcare provider, and half of the average household's health expenditures are for drugs. Financial, geographic, social and quality indicators were defined to measure accessibility and its determining factors (Table 1). The smallest administrative unit, the health area (HA), was chosen as the sampling unit, to enable us to survey together healthcare demand, supply and consumption according to different concentrations of supply and demand. It behaves as a cluster of sampling units of different populations: drug retailers of all sectors, drug users, households, and ill persons within the households. The HA samples include Yaounde and Douala, with urban and rural sub-samples, for which sampling ratios increase with the diversity of supply and demand, according to several pre-defined factors. The study includes 400 HAs, covering more than one third of the population (Table 2). Within these HAs, 900 pharmacies and other formal drug retailers, 709 street vendors, 4,505 households, 2,532 ill persons in these
households, 4,121 pharmacy customers and 850 customers of street vendors were surveyed, i.e., more than 13,600 questionnaires. Assessment of data quality shows that the sample is representative of the national population for its socioeconomic characteristics. Its geographic distribution, even after correction, nonetheless favors urban areas, where both supply and demand are high. Generalizing the 3 sub-samples to the national level thus requires caution, especially for the geographic distribution. Other limitations and possible biases are described and evaluated. However, the retrospective demographic and statistic evaluation shows that the samples are representative of their population and that the data quality can be considered good. This article describes the background of this study and justifies its methodological choices. Future publications will analyze the data collected.

Publication Types:
Validation Studies

PMID: 16207577 [PubMed - indexed for MEDLINE]


Reinfections, persistent infections, and new infections after general population screening for Chlamydia trachomatis infection in the Netherlands.

Veldhuijzen IK, Van Bergen JE, Gotz HM, Hoebe CJ, Morre SA, Richardus JH; PILOT CT Study Group.


OBJECTIVES: The objectives of this study were to determine the rate of new infections and reinfections or persistent infections with Chlamydia trachomatis to define appropriate screening intervals and to identify risk factors for reinfection. DESIGN: This was a cross-sectional study among a subsample of
participants in a population-based screening. SETTING: This study was conducted in urban and rural areas in The Netherlands. PARTICIPANTS: A total of 21,000 15-to 29-year-old women and men were invited for home-based urine testing. One year after the study, a subsample of 299 participants were offered retesting. MAIN OUTCOME MEASURES: The authors studied the rate of infection with C. trachomatis. Serovar determination was used to potentially discriminate between new infections and reinfections or persistent infections. RESULTS: Nine C. trachomatis infections were found among 187 responders (4.8% confidence interval, 1.7-7.9). The prevalence was 10.4% (5 of 48) in previous positives and 2.9% (4 of 139) in negatives. Three of 5 repeatedly positive participants were infected with a different C. trachomatis serovar. CONCLUSIONS: Our study indicates that infected persons found in a systematic, population-based screening should be re-screened within 1 year. Optimal screening intervals still need to be determined.

PMID: 16205300 [PubMed - indexed for MEDLINE]

Advancing social workers' responsiveness to health disparities: the case of breast cancer screening.

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This study provides the basis for customizing culturally responsive social work health promotion programs aimed at eliminating breast cancer screening and mortality disparities between white and African American women. Survey data collected from a random sample of 853 women in rural North Carolina were used to explore the impact of psychosocial factors, including cultural beliefs, on
differences by race and age in behavioral intentions if a breast lump was found. Multivariate logistic regression analysis revealed that age and past mammography screening predicted the intention to get a mammogram, whereas physician communication about breast cancer risk, never having a mammogram, breast cancer worry, and religious beliefs about God's role in curing cancer influenced women's intentions to watch the lump for changes. Factors in both models did not account for racial differences. The findings can help social workers tailor more culturally respectful breast health interventions and have implications for the development of other efforts to eliminate health disparities.

PMID: 16190298 [PubMed - indexed for MEDLINE]


Tick species and tick-borne infections identified in population from a rural area of Spain.


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To determine the tick species that bite humans in the province of Soria (Spain) and ascertain the tick-borne pathogens that threaten people's health in that province, 185 tick specimens were collected from 179 patients who sought medical advice at health-care centres. The ticks were identified, and their DNA examined by PCR for pathogens. Most ticks were collected in autumn and spring (59 and 57 respectively). Nine species of ticks were identified, the most frequent being Dermacentor marginatus (55.7%), Ixodes ricinus (12.4%) and Rhipicephalus bursa (11.9%). Ninety-seven females, 66 males, 21 nymphs and one larva were identified. Twenty-six ticks carried DNA from Rickettsia spp. (11 Rickettsia
slovaca, 6 Rickettsia spp. RpA4/DnS14, 1 Rickettsia massiliae/Bar29, and 8 unidentified); two ticks carried DNA from Borrelia burgdorferi sensu lato and seven ticks harboured DNA from Anaplasma phagocytophilum.

PMID: 16181517 [PubMed - indexed for MEDLINE]


Lyme disease in France: a primary care-based prospective study.

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To estimate the incidence of Lyme borreliosis in France, describe its clinical presentations, and assess its potential risk factors, we conducted a nationwide prospective study in the French Sentinelles Network, consisting of 1178 general practitioners (GPs). Of these, 875 (74%), i.e. 1.6% of all French GPs, participated in the study from May 1999 to April 2000. Eighty-six cases of Lyme disease were reported and validated, of which 77 (90%) consisted of erythema migrans. At national level, the incidence was estimated at 9.4/100,000 inhabitants. Compared to the French general population, Lyme disease patients were older (P<10(-4)), more were living in rural areas (P<10(-3)), and amongst the working population, more were farmers (P<10(-3)) and fewer, salaried workers (P<0.005). Cervidae density correlated strongly with the estimated regional incidence of Lyme disease (r=0.82). Both incidence data and identified risk factors can help to target measures for its prevention and treatment.

PMID: 16181516 [PubMed - indexed for MEDLINE]


Rubella and measles seroprevalence among women of childbearing age, Argentina,
To assess rubella and measles susceptibility among women of childbearing age we conducted a cross-sectional seroprevalence study in four cities and one rural area in Argentina. A convenience sample of women aged 15-49 years seeking care in public health-care institutions was selected (n=2804). Serum specimens were tested for rubella and measles IgG antibody titres. The overall susceptibility to rubella and measles was 8.8 and 12.5% respectively. Seroprevalence differences were found for both rubella (P<0.001) and measles (P=0.002) across sites. Rubella seroprevalence was higher in women aged ≥40 years than in younger women (P=0.04). Measles seroprevalence tended to increase with age (P<0.001). Approximately 15% of women aged 15-29 years were not immune to measles. No risk factors were associated with rubella seronegativity; however, age (P<0.001) and having less than four pregnancies (P<0.001) were factors associated with measles seronegativity. Our findings support the introduction of supplemental immunization activities targeting adolescents and young adults to prevent congenital rubella syndrome and measles outbreaks over time.

PMID: 16181506 [PubMed - indexed for MEDLINE]
OBJECTIVE: To explore health-related behaviors among adolescent mothers living in the rural area of Taoyuan, Taiwan. DESIGN: A cross-sectional descriptive design and nonrandom survey method were used. SAMPLE: The sample consisted of 37 adolescent mothers, identified by public health nurses. MEASUREMENTS: Standardized interview and Adolescent Health Promotion (AHP) questionnaire. RESULTS: Findings revealed a pattern of economic disadvantage. Nearly half of the participants still lived with their biological parents. Two-thirds needed economic support from their parents (generally coming from their biological mother). Thirty-five percent of participants reported never using contraceptives, two-thirds had never had a Pap smear, and 44% did not breast-feed their infants. Nearly 60% of the children were cared for by the biological mothers of the participants. Adolescent mothers with high school education, and who were employed, married, and received parental economic support had better health-related behaviors than adolescent mothers without these characteristics. CONCLUSIONS: Although the study sample has geographic limitations, future international studies with similar populations of adolescent mothers in rural settings will help public health nurses understand adolescent mothers' stressors and needs which in turn affect their health-related behaviors. Intervention strategies are needed to encourage behaviors to keep this population healthy.

PMID: 16150009 [PubMed - indexed for MEDLINE]


Cancer frequency in poor rural communities consuming a very limited diet.

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Low-income rural southern African American women experience a high prevalence of morbidity and mortality from coronary heart disease (CHD) as well as other related cardiovascular (CV) diseases. Few models have taken into account the full impact of the contextual influences encountered on a daily basis by these women, and the effect of these influences on their CV health status. There are clearly demarcated examples of existing health disparities that occur in various ethnic/racial, underserved, and vulnerable populations. Yet, to date, there is no conceptual model that offers a plausible explanation as to why health disparities exist. Consequently, there is a lack of guidance as to where interventions should be focused for effective CV risk reduction. Because African American women continue to die at a disproportionately higher rate, and at earlier ages than do Caucasian women, it is imperative that new theoretical models capable of driving empirically based interventions be developed, tested, and implemented. One possible choice is the conceptual model proposed in this article. The model is based on the interrelationships between contextual risk factors, rational choice theory (RCT), and opportunity cost. Conceivably, this
model may serve as a foundation to ground conceptual thought and drive theory-based interventions to reduce the health disparities in the CV health of low-income rural southern African American women. A model is presented in an attempt to provide guidance for advanced practice nurses who must struggle with addressing the critical need to reduce ethnic and race-associated CV health disparities.

Publication Types:
Review

PMID: 16141776 [PubMed – indexed for MEDLINE]


A chronic disease outreach program for Aboriginal communities.

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BACKGROUND: Our objective is to describe a program to improve awareness and management of hypertension, renal disease, and diabetes in 3 remote Australian Aboriginal communities. METHODS: The program espouses that regular integrated checks for chronic disease and their risk factors are essential elements of regular adult health care. Programs should be run by local health workers, following algorithms for testing and treatment, with backup, usually from a distance, from nurse coordinators. Constant evaluation is essential to develop community health profiles and adapt program structure. RESULTS: Participation ranged from 65% to 100% of adults. Forty-one percent of women and 72% of men were current smokers. Body weight varied markedly by community. Although excessive in all, rates of chronic diseases also differed markedly among
communities. Rates increased with age, but the greatest numbers of people with morbidities were middle age and young adults. Multiple morbidities were common by middle age. Hypertension and renal disease were early features, whereas diabetes was a variable and later manifestation of this integrated chronic disease syndrome. Adherence to testing and treatment protocols improved markedly over time. Substantial numbers of new diagnoses were made. Blood pressure improved in people in whom antihypertensive agents were started or increased. Components of a systematic activity plan became more clearly defined with time. Treatment of people in the community with the greatest disease burden posed a large additional workload. Lack of health workers and absenteeism were major impediments to productivity. CONCLUSION: We cannot generalize about body habitus, and chronic disease rates among Aboriginal adults. Pilot data are needed to plan resources based on the chronic disease burden in each community. Systematic screening is useful in identifying high-risk individuals, most at an early treatable stage. Community-based health profiles provide critical information for the development of rational health policy and needs-based health services.

PMID: 16108977 [PubMed - indexed for MEDLINE]


Diabetes and hypertension in pregnancy in a rural community of Bangladesh: a population-based study.

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AIMS: Gestational diabetes mellitus (GDM) is associated with increased infant mortality. Diabetes and infant mortality is higher in Bangladesh but the
prevalence of diabetes and hypertension in pregnancy is not known. Thus, this study addressed the prevalence of diabetes and hypertension in pregnancy.

METHODS: We selected 10 villages randomly in a union council of Nandail subdistrict. Following a population census ($n = 14,382$: male/female = 7476/6906) on demography and marital status, we interviewed 2205 married women (18-44 years) for detection of pregnancy. Of a total of 172 pregnancies, we investigated 147 with a gestational age of 24-28 weeks for obstetrical history, clinical examination and blood pressure (BP). Fasting (FBG) and 2-h blood glucose (2hBG) were assessed by Hemocue cuvette. WHO diagnostic criteria were used. RESULTS: The overall prevalence (95% CI) of diabetes was 6.8% (1.88-9.32) and 8.2% (3.74-12.64) according to FBG and 2hBG, respectively. The crude prevalence of systolic and diastolic hypertension was 6.8 and 5.4%, respectively. The median (interquartile range) values for age, BMI and FBG of the participants were 25.0 (21.0-30.0) years, 19.5 (18.2-21.2) and 3.9 (3.6-4.3), respectively. The history of abortion, neonatal death and stillbirth was found in 19.9, 11.4 and 9.6%, respectively. The prevalence of GDM was higher among those with the history of stillbirth (15.4 vs. 6.0%) and neonatal death (11.8 vs. 6.2%) than those without. CONCLUSION: The prevalence of GDM in rural Bangladesh is comparable with any other population with higher prevalence of GDM. Increased morbidity and mortality among mothers and newborns in Bangladesh may, in part, be because of increased prevalence of GDM.

PMID: 16108860 [PubMed – indexed for MEDLINE]


Relative role of major risk factors for Type 2 diabetes development in the historical cohort of the Brisighella Heart Study: an 8-year follow-up.

Cicero AF, Dormi A, Nascetti S, Panourgia MP, Grandi E, D'Addato S, Gaddi A.
AIM: The aim of this study was to evaluate and quantify the role of different risk factors in the long-term development of Type 2 diabetes mellitus in a rural Italian population. METHODS: The Brisighella Heart Study (BHS; 1972-2003) is a prospective, population-based longitudinal epidemiological cohort involving 2939 randomly selected subjects, aged 14-84 years, resident in the rural Italian town of Brisighella. For this study, we randomly selected 1441 adult subjects representative of the Brisighella population; consecutively visited during three BHS surveys. A step-wise Cox regression analysis determined the prognostic significance of each independent risk factor for the development of Type 2 diabetes in the 8-year long follow-up. RESULTS: Blood pressure, high-density lipoprotein cholesterol, triglycerides, physical activity, total energy intake, and drug treatment had no effect on the incidence of diabetes. Age was a significant predictor of Type 2 diabetes when inserted alone in the model (P = 0.007), but irrelevant when adjusted for baseline body mass index (BMI) and or fasting plasma glucose. Among these with impaired fasting glucose (IFG), the diabetes incidence/year was estimated to be 6.6% for men and 11.2% for women (P < 0.001). Basal glycaemia under 6.1 mmol/l were not significant long-term predictors of diabetes development, while higher basal glycaemia and each level BMI were. CONCLUSION: Our findings confirm that IFG and BMI predict Type 2 diabetes development in our population. This should help to identify effective approaches to prevention.

PMID: 16108859 [PubMed – indexed for MEDLINE]

Women of higher socio-economic status are more likely to be overweight in Karnataka, India.

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This study explores differences in body mass index (BMI), diet, and lifestyle between women of varying socio-economic status in Karnataka, India, using data from the National Family Health Survey 2 (n = 4374), in-depth interviews (n = 20) and six focus group discussions (n = 40) completed in Bangalore. Predictors of overweight (BMI > or = 25 kg/m²) were modelled using logistic regression. A content analysis of the qualitative data was undertaken to understand behavioural factors affecting overweight. Prevalence of undernutrition was high for rural women (48%) and for overweight, prevalence was high in large urban areas (44%). In Bangalore knowledge of unhealthy foods was higher for richer women, although their diet and activity levels were less healthy than poorer women, who did not have the resources to purchase less healthy diets. Although some knowledge of the need for activity and healthy diets exists for wealthier Bangalore women, this does not translate into healthy behaviour, suggesting a need for obesity prevention programmes.

PMID: 16077746 [PubMed - indexed for MEDLINE]


Are child eating patterns being transformed globally?

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OBJECTIVE: To examine the extent to which child dietary patterns and trends are
changing globally. RESEARCH METHODS AND PROCEDURES: Diets of children 2 to 19 years of age were studied with nationally representative data from Russia and the United States, nationwide data from China, and regional data from metropolitan Cebu, Philippines. Twenty-four-hour dietary recalls were examined at several points in time to examine trends in calories consumed away from home, snacking behavior, and soft drink and modern fast food consumption. Urban-rural trends were compared. RESULTS: U.S. and Cebu youth consume more than one-third of their daily calories and a higher proportion of snack calories from foods prepared away from home. In contrast, away from home food consumption is minimal in Chinese and Russian children. U.S. and Cebu youth consume about one-fifth of their total daily energy from snacks, but snacks provide a much lower proportion of energy in Russia (approximately 16%) and China (where snacks provide only approximately 1% of energy). Fast food plays a much more dominant role in the American diet (approximately 20% of energy vs. 2% to 7% in the other countries), but as yet does not contribute substantially to children's diets in the other countries. Urban-rural differences were found to be important, but narrowing over time, for China and Cebu, whereas they are widening for Russia. DISCUSSION: This research suggests that globalization of the fast food and other modern food sectors is beginning to affect child eating patterns in several countries undergoing nutrition transition. However, the contribution of fast food and soft drinks to the diet of children remains relatively small in China, Russia, and Cebu, Philippines, relative to the United States.

PMID: 16077000 [PubMed - indexed for MEDLINE]


Parity and body weight in the United States: differences by race and size of place of residence.
OBJECTIVE: In women, parity has been studied in relation to body weights. This study examined whether and how relationships between parity and body weight differ by race and size of place of residence, adjusting for sociodemographic factors (age, income, education, working status, and marital status) and health behaviors (alcohol consumption, birth control pills, diet, physical activity, and smoking). RESEARCH METHODS AND PROCEDURES: A U.S. national sample of 3398 white and black women from the Third National Health and Nutrition Examination Survey was used to study the relationships using multiple linear regression analysis. RESULTS: The parity-weight relationships varied by race and size of place of residence. After adjusting for the covariates, significant relationships between parity and body weight were found only in black women in metropolitan areas and white women in non-metropolitan areas. Compared with women with no children, white women with two children living in non-metropolitan areas tended to have lower BMIs, whereas black women in metropolitan areas with one or two children showed higher BMIs. DISCUSSION: Overall, the parity-weight relationships in these groups of women were not strong or linear. The parity-weight relationships of black women in non-metropolitan areas warrant further examination.

PMID: 16076997 [PubMed - indexed for MEDLINE]


Outbreak of Shigella sonnei in a rural hotel in La Gomera, Canary Islands, Spain.

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Shigella sonnei is a significant cause of gastroenteritis in both developing and industrialized countries. Knowledge of the diversity and antimicrobial susceptibility of the bacterium may be helpful in the management of both individual cases and outbreaks. This study was undertaken to evaluate the molecular epidemiology of an outbreak of diarrhea due to S. sonnei. The outbreak involved 14 of 28 (50%) tourists in a small rural hotel in La Gomera, Canary Islands, Spain. All of the S. sonnei isolates recovered had the same antimicrobial susceptibility and pulsed-field gel electrophoresis patterns, suggesting that the outbreak was produced by a single strain.

PMID: 16052462 [PubMed - indexed for MEDLINE]


Incidence of tuberculosis in mountain areas and surrounding townships: dose-response relationship by geographic analysis.

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PURPOSE: The incidence of tuberculosis (TB) in Taiwan is known to be high in aboriginal mountain areas and low in the surrounding non-mountain areas. The aim of this study was to assess whether TB incident cases in the surroundings of mountain areas decreased with distance from foci of mountain areas. METHODS: The mountain areas in Taiwan are adjacent to each other and divided into four geographic groups. Townships with high TB incidence in each group were treated as the foci of TB infection. The surrounding townships were then classified, by distance away from foci, into three levels: < 20 km, 20 to 40 km, and 40 to 60 km. Data were obtained on a total of 84,366 TB cases from 1991 to 1997 from the
Taiwan Tuberculous Disease Registry Center. RESULTS: The incidence of TB in each of the four groups was significantly higher in the mountain areas compared with non-mountain areas, with relative risks ranging from 8.4 (95% confidence interval [CI], 7.8-9.1) for the southern group to 15.0 (95% CI, 13.4-16.9) for the northern group. Relative risks for surrounding townships decreased with distance in all four groups. Such a gradient relationship was statistically significant. CONCLUSIONS: A significant dose-response relationship between distance from townships with a high incidence of TB and the incidence of TB in the surrounding areas has been demonstrated.

PMID: 16029844 [PubMed - indexed for MEDLINE]


Intrapartum oxytocin use for labor acceleration in rural India.

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OBJECTIVE: To examine factors associated with the use of oxytocin for acceleration of labor in women delivered at home in rural India. METHOD: Quantitative data were collected from 527 women who were delivered at home and qualitative interviews were carried out with 21 mothers and 9 birth attendants. RESULTS: Oxytocin use was associated with higher education and socioeconomic status, primigravidity, and delivery by a traditional birth attendant. CONCLUSION: Labor acceleration with oxytocin occurs indiscriminately in India. Oxytocin use should be regulated, and training for birth attendants should be provided as well as health education for pregnant women.

PMID: 16023648 [PubMed - indexed for MEDLINE]
Estimating the prevalence of cannabinoid use urine testing: a preliminary study in Kerman, Iran.

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AIMS: This primary study was performed to determine the prevalence rate of cannabinoid consumed in Kerman (Iran). MEASUREMENTS: Urine samples of 700 males, referred to a clinical lab in Kerman city were collected for detection of cannabinoid metabolites. Assessment analysis was a monophasic immunoassay rapid technique. The study was completely blind and only age and residence of samples were revealed. All stages were confirmed and supervised by the ethics committee.

RESULTS: The prevalence of cannabinoid use was 0.6%. All four positive cases were urban, with ages 31, 36, 40 and 67. More than 90% of referred cases were urban with mean age of 46.8+/-16 while the mean age of rural cases was 54.3+/-17 years. CONCLUSIONS: Considering the age range and possibility of the underlying disease in the study population, the prevalence of cannabinoid use was more than what was expected. Urine analysis as a method for assessing the prevalence rate requires a wide sample size and age distribution matching the age distribution of the study population. In addition, the entrance criteria should not include sick cases.

PMID: 16022943 [PubMed - indexed for MEDLINE]

Methamphetamine and alcohol abuse and dependence symptoms: associations with affect lability and impulsivity in a rural treatment population.
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The present study examined associations between impulsivity and affect lability and methamphetamine and alcohol abuse and dependence symptoms in a rural inpatient treatment population (N=235). Thirty-two percent of participants reported methamphetamine use in the past 90 days prior to admission. Amphetamine use disorders were found to be more common among younger participants whereas alcohol use disorders were more common among older and Native American participants. After controlling for age, gender, use frequency, and injection use, impulsivity but not affect lability was associated with methamphetamine abuse but not dependence symptoms. Lability but not impulsivity was associated with alcohol dependence but not abuse symptoms after controlling for age, gender, and use frequency. Consistent with past epidemiological studies, results indicate that methamphetamine use is a prominent problem facing rural substance use treatment facilities. Affect lability and impulsivity are associated with methamphetamine and alcohol-related problems in this population.

PMID: 16022933 [PubMed - indexed for MEDLINE]


Rural cases of equine West Nile virus encephalomyelitis and the normalized difference vegetation index.

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Data from an outbreak (August to October, 2002) of West Nile virus (WNV)
encephalomyelitis in a population of horses located in
northern Indiana was
scanned for clusters in time and space. One significant (p = 0.04) cluster of
case premises was detected, occurring between September 4 and 10 in the
south-west part of the study area (85.70 degrees N, 45.50 degrees W). It
included 10 case premises (3.67 case premises expected) within a radius of 2264
m. Image data were acquired by the Advanced Very High
Resolution Radiometer
(AVHRR) sensor onboard a National Oceanic and Atmospheric
Administration
polar-orbiting satellite. The Normalized Difference
Vegetation Index (NDVI) was
calculated from visible and near-infrared data of daily
observations, which were
composited to produce a weekly-1km(2) resolution raster
image product. During
the epidemic, a significant (p < 0.01) decrease (0.025 per
week) in estimated
NDVI was observed at all case and control premise sites. The median estimated
NDVI (0.659) for case premises within the cluster
identified was significantly
(p < 0.01) greater than the median estimated NDVI for
other case (0.571) and
control (0.596) premises during the same period. The
difference in median
estimated NDVI for case premises within this cluster,
compared to cases not
included in this cluster, was greatest (5.3% and 5.1%,
respectively) at 1 and 5
weeks preceding occurrence of the cluster. The NDVI may be
useful for
identifying foci of WNV transmission.

PMID: 16011435 [PubMed - indexed for MEDLINE]


Positional accuracy of two methods of geocoding.

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BACKGROUND: Geocoding is often used in epidemiologic studies to map residences with geographic information systems (GIS). The accuracy of the method is usually not determined. METHODS: We collected global positioning system (GPS) measurements at homes in a case-control study of non-Hodgkin lymphoma in Iowa. We geocoded the addresses by 2 methods: (1) in-house, using ArcView 3.2 software and the U.S. Census Bureau TIGER 2000 street database; and (2) automated geocoding by a commercial firm. We calculated the distance between the geocoded and GPS location (positional error) overall and separately for homes within towns and outside (rural). We evaluated the error in classifying homes with respect to their proximity to crop fields. RESULTS: Overall, the majority of homes were geocoded with positional errors of less than 100 m by both methods (ArcView/TIGER 2000, median = 62 m [interquartile range = 39-103]; commercial firm, median = 61 m [interquartile range = 35-137]). For town residences, the percent geocoded with errors of $\leq$100 m was 81% for ArcView/TIGER 2000 and 84% for the commercial firm. For rural residences, a smaller percent of addresses were geocoded with this level of accuracy, especially by the commercial firm (ArcView/TIGER 2000, 56%; commercial firm, 28%). Geocoding errors affected our classification of homes according to their proximity to agricultural fields at 100 m, but not at greater distances (250-500 m). CONCLUSIONS: Our results indicate greater positional errors for rural addresses compared with town addresses. Using a commercial firm did not improve accuracy compared with our in-house method. The effect of geocoding errors on exposure classification will depend on the spatial variation of the exposure being studied.

PMID: 15951673 [PubMed - indexed for MEDLINE]


Childhood leukemia and socioeconomic status in Canada.
BACKGROUND: Leukemia is one of the most common potentially fatal illnesses in children, and its causes are not well understood. Although socioeconomic status (SES) has been related to leukemia in some studies, this apparent association may be attributable to ascertainment or participation bias. This study was undertaken to determine whether there is a difference in incidence of childhood leukemia for different levels of SES, as measured by neighborhood income, in an unselected population case group. METHODS: All cases of childhood leukemia diagnosed in the years 1985-2001 were identified from population-based cancer registries in Canada. Postal codes for the place of residence at diagnosis were used to ascertain the census neighborhoods for cases. We constructed neighborhood-based income quintiles from census population data, and stratified the population at risk by sex and 5-year age groupings. Age-standardized incidence rates and 95% confidence intervals (CIs) were calculated. We used Poisson regression to compare incidence rate ratios (RRs) across income quintiles. RESULTS: A slightly lower relative risk of childhood leukemia was observed in the poorest quintile compared with the richest (RR = 0.87; 95% CI = 0.80-0.95). The lower risk in the poorest quintile was restricted to acute lymphoid leukemia (0.86; 0.78-0.95) and was strengthened slightly by restriction to urban areas (0.83; 0.74-0.93). CONCLUSIONS: This analysis suggests that high SES is a true risk factor for childhood leukemia and that inconsistent results from other studies may be related to differences in case ascertainment or study participation.

PMID: 15951671 [PubMed - indexed for MEDLINE]
OBJECTIVE: To survey the prevalence of chronic obstructive pulmonary disease (COPD) in urban and rural areas in Guangdong Province and relevant risk factors.

METHODS: Using the same protocol including Burden of Obstructive Lung Disease (BOLD) questionnaire, a questionnaire survey was conducted among 3449 respondents, 1370 males and 1916 females, aged over 40 with an average age of 56.8, by random disproportional cluster sampling in Liwang District of Guangzhou City and Yunyan Town, Lechang City, northern Guangdong Province. Spirometry was performed in all subjects. Lung function indices were regarded as gold criteria of diagnosis of COPD. RESULTS: There were 3286 cases with full data and good quality spirometry test, 1370 males and 1916 females, aged 56.8. The total prevalence of COPD was 9.4%. The prevalence of COPD in the males was 15.9%, significantly higher than that in the females (4.8%, \( P < 0.01 \)). The prevalence in the rural area was 12.0%, significantly higher than that in the urban area (7.4%, \( \chi^2 = 20.3, P < 0.01 \)). 67.7% of the patients with COPD presented symptoms such as cough, expectoration and/or dyspnoea. 58.7% of the COPD patients (78.9% of the male patients and 10.9% of the female patients) smoked. The odd ratio (OR) for COPD in the smokers was 2.59 (95% CI 1.87 – 3.59). Only 15.1% of the smokers (17.9% of the male smokers and 4.1% of the female smokers) developed COPD. No significant relationship was found between pack years of cigarette smoking and COPD prevalence. The risk of COPD was increased when
biomass fuels were used in house cooking (OR = 1.54 95% CI 1.08 - 2.20).
Furthermore, the combination of biomass fuels and cigarette smoking further increased the risk with the OR of 4.41 (95% CI 3.22 - 6.04), indicating a synergetic impact of smoking and biomass burning on the prevalence of COPD. The Prevalence of doctor-diagnosed COPD based on the clinical manifestation was significant lower than the actual prevalence (only 31.0%).
CONCLUSIONS: COPD is a very common disease in Guangdong. The prevalence of COPD is higher in the rural area than in the urban area, which may be attributed to the synergic effect of smoking and biomass burning. Lung function test is of great importance in COPD diagnosis, especially in the earlier stage of COPD and those asymptomatic COPD patients.

PMID: 15949380 [PubMed - indexed for MEDLINE]


[Utility of plain bednets for prevention of malaria in rural areas]
[Article in French]
Talani P, Moutima G, Obengui, Moyen G.

Publication Types: Letter

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Intermediate outcomes of a tribal community public health infrastructure assessment.

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The purpose of this collaborative participatory project was to assess the
strengths and needs of a tribal community as part of a larger public health capacity building program. Key project partners included: the Ramah Band of Navajo Indians, the Albuquerque Area Indian Health Board, the University of New Mexico Masters in Public Health Program, and the University of Nevada, Las Vegas, American Indian Research and Education Center. Principal intervention steps entailed: 1) relationship-building activities among tribal programs and between the Tribe and the scientific community; 2) an orientation to public health; 3) a comprehensive public health infrastructure assessment, utilizing a standardized CDC instrument; and 4) a prioritization of identified needs. The direct outcome was the development and beginning implementation of a community specific public health strategic action plan. Broader results included: 1) increased comprehension of public health within the Tribe; 2) the creation of a community public health task force; 3) the design of a tribally applicable assessment instrument; and 4) improved collaboration between the Tribe and the scientific community. This project demonstrated that public health assessment in tribal communities is feasible and valuable. Further, the development of a tribally applicable instrument highlights a significant tribal contribution to research and assessment.

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