

## 13th ALL IRELAND SOCIAL MEDICINE MEETING

Proceedings of meeting held 9th - 11th October 1992 in Galway

### EUROPEAN COMMUNITY RESPIRATORY HEALTH SURVEY : ASTHMA PREVALENCE IN WEST DUBLIN.

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The objective of this multi-centre study is to estimate the variation in prevalence of asthma, asthma-like symptoms and bronchial lability in Europe and to assess the extent to which known or suspected risk factors explain the variations in prevalence.

In the first phase, the prevalence of asthma and asthma-like symptoms among representative samples of 3,000 20-44 year olds from urban and rural districts across Europe was estimated by means of a standardised respiratory questionnaire. In the second phase, up to 25 per cent of each sample are being invited for standardised respiratory and allergy tests.

In the Dublin centre, the sampling frame was the 1990 Electoral Register for 55 contiguous wards in West Dublin. In order to yield 3000 people of the required age, 8,000 names were chosen at random from the Register. 1,266 of those outside the age range were eliminated by cross-matching names with the General Medical Services lists.

The remaining 6,734 people were approached by 35 survey workers. Of the 6,734, 2,467 were outside the age range, 895 had moved and 97 were dead. 2,428 valid questionnaires were obtained, 140 refused and 707 could not be contacted.

The results of the first phase showed a high prevalence of respiratory symptoms. In the last 12 months, four per cent of the sample had had an attack of asthma, 15% had experienced wheezing with shortness of breath and 9% had been awoken from sleep by tightness of the chest.

### ASTHMA, RESPIRATORY SYMPTOMS, AND ASSOCIATED HEREDITARY AND ENVIRONMENTAL FACTORS IN IRELAND

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This study documents the prevalence of respiratory symptoms, physician diagnosed asthma, and associated hereditary and environmental factors in Ireland.

5,000 people were randomly selected from the electoral register; 1,000 received postal questionnaires in counties Cork, Galway, Donegal, Longford, and North Dublin. A further 750 people were selected for interview in Dublin. The response rate in the interviewed sample was 90%, and 43% in the postal sample.

Response rate bias resulted in significant over-reporting of symptoms and diagnoses, and under-reporting of smoking, in the postal sample. The interviewed sample was used to compare associations and the postal samples to compare relative prevalences between counties and rural/urban areas. 30% of respondents reported ever wheezing, 21% current wheeze, and 9.5% persistent wheeze. 5.4% ever had asthma and 2.3% were currently

treated. A family history of asthma or eczema was significantly associated with both ever wheezing and ever having asthma. Tonsillectomy, hayfever, eczema, and other allergies were associated with both wheeze and asthma. Exposure to passive smoke, in never smokers, was associated with both wheeze and asthma. There was a 20% excess of symptoms, and diagnoses, in urban populations.

### A SIMPLE CLINICAL SCORING SYSTEM TO PREDICT OPERATIVE MORTALITY FOLLOWING CORONARY ARTERY BYPASS SURGERY IN MEN

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Objective - To derive a simple clinical scoring system for the prediction of 30-day mortality after coronary artery bypass surgery.

Patients and Setting - All 4276 male patients who had primary isolated non emergency coronary artery bypass surgery in the Republic of Ireland between 1984 and 1989.

Outcome measure - Operative (30-day) mortality.

Results - Using logistic regression, a clinical scoring system was derived from data on 2636 patients studied in 1984 - 1987 (mortality: 2.8%), and prospectively tested on 1640 patients studied in 1988-1989 (mortality: 2.3%). Risk was determined by adding scores (in parentheses) assigned to the following five factors: age > 60 (10), myocardial infarction in the six weeks preceding surgery (9), left ventricular failure (8), extensive distal coronary artery disease (7) and body surface area < 1.83 m<sup>2</sup> (6).

Patients were then assigned to one of five risk categories. The predicted mortality for those in risk group I (score <2) was <1.25%, and was >10.0% for those in risk group V (score >21). In 1984-1987 and prospectively in 1988-1989 the score discriminated well between low and high risk patients. In 1984-1987 the relative risk between risk groups V and I was 9.7 (95%CI:4.620.7), and in 1988-1989 was 15.2(4.6-50.5).

Conclusions - A clinical scoring system, easily used by a general physician, can predict operative mortality in males for whom primary isolated coronary artery bypass surgery is contemplated.

### A DIETARY CROSS OVER TRIAL IN CHINESE STUDENTS IN BELFAST

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INSERM Paris.

A sample of 151 Chinese subjects was selected from Taiyuan, Shanxi Province, People's Republic of China to broadly age-match 202 subjects in Belfast who were selected as controls in a case-control study of myocardial infarction. Striking differences emerged in lipid profiles, especially in total cholesterol. Four-fifths (83%) of this difference could be accounted for by LDL-cholesterol.

Lipid parameters	Belfast	Taiyuan	F	P
Total chol(mmol/l)	6.15(0.07)	4.28(0.09)	232.0	<10 <sup>-4</sup>
HDL cholesterol	1.33(0.02)	1.09(0.03)	36.3	<10 <sup>-4</sup>
LDL cholesterol	4.09(0.06)	2.59(0.08)	191.2	<10 <sup>-4</sup>
VLDL cholesterol	0.72(0.03)	0.61(0.03)	6.1	<0.05
Triglycerides	1.83(0.08)	1.95(0.09)	0.9	NS
ApoE	0.06(0.01)	0.10(0.01)	68.2	<10 <sup>-4</sup>
LpA1	0.44(0.01)	0.42(0.01)	1.7	NS
LpE:B	0.48(0.02)	0.49(0.03)	0.2	NS
Lp(a)B	0.14(0.01)	0.14(0.02)	0.0	NS

The ApoB/4311 (ser) allele frequency was much higher in China (0.71) than in Belfast (0.23). Homozygotes were present in about 5% of the Northern Irish population and in about 50% of the Chinese population, but an association between this allele and higher levels of LpA1 and lower levels of LpE:B observed in Northern Ireland was absent in China. This suggests that environmental factors, such as diet, play a part in the expression of the allele. In view of this we are currently conducting a dietary cross-over trial in Chinese students in Belfast to explore the determinants of these lipid profiles.

Haemostatic variables are also being investigated.

#### VITAMIN B6 AND FOLATE REDUCE HOMOCYSTEINE CONCENTRATION IN CORONARY ARTERY DISEASE

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Hyperhomocysteinaemia is a risk factor for vascular disease and is most often due to cystathionine synthase deficiency. Vitamin B6 is an essential cofactor for this enzyme and folic acid is also required for the remethylation of homocysteine to methionine. Deficiency of both of these may be responsible for elevated homocysteine levels. Twelve (10M, 2F, mean age 45+5 years) patients with documented coronary heart disease received oral B6 and folate supplements for 4 weeks in a double-blind, cross-over placebo-controlled study. Peak total homocysteine was measured prior to, and following, each treatment period.

Serum homocysteine concentration (umol/L)

Baseline	Placebo	Active
34.5	33.7	27.0*

\* P=0.0004 baseline vs both baseline and placebo. There were no side effects. In patients with premature coronary artery disease treatment with vitamin B6 and folate reduces elevated homocysteine levels. This innocuous therapy may have an important role in the treatment of patients at increased risk of premature vascular disease.

#### REVIEW OF REPEAT CORONARY ARTERY BYPASS GRAFT OPERATIONS IN IRELAND

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The Irish Cardiac Surgery Register (ICSR) has provided a continuous record of all adult cardiac surgery operations in Ireland since 1983. Between January, 1983 and December, 1991 repeat coronary artery bypass graft (CABG) operations were carried out on 176 patients - mean age was 57.8 years (33-75), mean inter-operation interval was 6.6±3.3 years (0-13) and inhospital mortality was 9.0%.

Clinical, investigative and operative details for both opera-

tions were recorded on the register for patients who had both operations since 1983. The mean inter-operative interval was 3.5±2.2 years (0-8) and hospital mortality was 3.0%. Coronary angiogram prior to repeat operation showed that 79.0% of patients had extensive coronary artery disease compared to 54.0% prior to primary operation and 30.0% had poor distal coronary arteries compared to 1.5% before primary CABG. Proportionately more of these patients had severe anginal symptoms and were current smokers before first operation than the total population of patients (n=78) who had primary CABG during this period.

Significantly fewer patients had elective surgery at first CABG compared with all primary CABG patients (39% vs 54%; p<0.01). This review highlights a group of patients with rapid progressive disease and who were more symptomatic prior to first operation.

#### PARKINSON'S DISEASE IN IRELAND: DESCRIPTIVE EPIDEMIOLOGY FROM ROUTINE DATA SOURCES

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Little is known about the epidemiology of Parkinson's disease (P.D.) in Ireland. We have examined mortality statistics for the period 1969 to 1988 aggregated by five year periods. Overall mortality showed a decline in all age-specific rates under the age of 75 years. Mortality over 75 years showed an almost twofold increase. These results are in accord with data from Europe and the U.S.A., but are difficult to interpret. This analysis will be extended over a longer time-period and will examine birth cohort effects.

As mortality statistics by place of death are not routinely published, we have examined data from Hospital In-Patient Enquiry (HIPE). Only admissions of patients under the age of 65 years were examined for the period 1981 - 1988, as older cases are more often under ascertained. Areas of residence were classified into urban (<5%), semi-rural (5-69%) and rural (>70%) depending on the proportion of rural aggregates. The relative rates of admission were urban 1.00, semi-rural 1.14 (95% C.I. 0.86-1.60) and rural 1.58 (95% C.I. 1.18-2.11). These results must be interpreted with caution due to biases in ascertainment but are consistent with several studies suggesting a greater risk of P.D. for a rural environment. We are currently undertaking a national case-control study of early-onset P.D. to examine certain risk factors that may explain this geographical distribution.

#### CONSUMER CHOICE AND THE TOBACCO REGULATIONS 1990: DO RESTAURATEURS MEET THEIR CLIENTS' NEEDS?

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The 1990 Tobacco regulations restricted smoking in public places, placing a requirement for a smoke free area in commercial premises acting as food outlets. These are subject to enforcement by Environmental Health Officers as part of their routine public health measures. However, an equally important incentive for the commercial retailer is the extent to which his customers require or comply with regulations. This is particularly important in locations where tourism is a key local industry.

This survey was undertaken to ascertain knowledge, attitudes and behaviour of both customers and restaurateurs in this regard. All restaurants in the city of Galway listed in the local telephone directory were surveyed by standard telephone interview. The purpose and confidentiality of the survey were clearly explained in advance. Participation of proprietors was 81%. 100% were aware of the legislation, complying in 71% cases. However, only 17% were aware of the number of people in the population who smoked and 28% of respondents felt that over stringent compliance with the law might discourage custom.

A quota sample of the general public was also undertaken. A hundred respondents participated, 40% being visitors to Galway. The majority were happy to comply with the legislation, and whether smokers (35%) or non smokers (65%) felt that a smoke free environment enhanced their enjoyment. The survey identifies the importance of perceived consumer preference in reinforcing legislative requirements and suggests an appreciable consumer retailer mismatch that might be successfully targeted in a local health promotion campaign.

#### A SURVEY OF THE KNOWLEDGE AND ATTITUDES OF HEALTH PROFESSIONALS ON INFANT FEEDING

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**Objective:** To determine the level of knowledge of attitudes to infant feeding and the factors which influence these, in health professionals in the Eastern Health and Social Services Board area.

**Design:** An anonymous postal survey. The questionnaire contained both open and closed questions.

**Sample:** All health visitors, midwives, clinical medical officers, dietitians, general practitioners and pharmacists in the area were surveyed (1482 in total). There was a 58.9% response rate (873 questionnaires).

**Results:** There were several inaccuracies identified in the knowledge base of staff. The level of knowledge on infant feeding varied considerably between professional groups, with dietitians scoring highest and pharmacists lowest. The attitudes of staff to breast feeding also differed between professional groups, with midwives scoring highest and pharmacists lowest. Increasing age, being a parent or having been breast fed, all had a negative influence on knowledge score. **Conclusion:** This survey has shown the need to make concerted efforts to improve the knowledge and attitudes of health professionals on infant feeding. It has proved a baseline against which future action can be measured.

#### BREAST FEEDING LEVELS IN THE SOUTHERN HEALTH & SOCIAL SERVICES BOARD.

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As part of a National Breast Feeding initiative, Health Boards in Northern Ireland were asked to form local Breast Feeding Initiative Groups with the aim of supporting and promoting breast feeding.

To establish local levels of breast feeding, Health Visitors in the Southern Health & Social Services Board were invited to complete questionnaires to ascertain levels of breast feeding at day 10 and at 6 weeks, for babies born during one month, ascertain problems and positive views reported by mothers and

canvass professionals as to why they felt breast feeding was not more common. A 94% response rate was achieved and information obtained on almost 400 babies. Only 23% were breast fed at day 10. This ranged from 15% to 27% between areas. This dropped to 16% by 6 weeks (11-19% between areas).

Problems experienced by the mothers and views from the professionals will be presented. These were very helpful in the development of a strategy to promote breast feeding events. Health Promotion activities to promote breast feeding will be described.

#### A STUDY OF INFANT FEEDING PRACTICES

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Considerable interest exists in the relationship between infant nutrition and health and disease in later years. Little current information is available on infant feeding practices in Ireland. This study aimed to establish a profile of infant feeding practices in an urban Community Care Area.

An interviewer administered questionnaire was used to collect data from all natural mothers attending with their infants for nine month developmental examinations, over a ten week period.

All two hundred and eighteen presenting mothers participated in the study. The mean age of mothers was 30.2 years. 123 (56%) were from social classes 1 and 2 and 177 (81%) were married. 107 (49%) infants were breastfed for a mean duration of six weeks and of these, social classes 1 and 2 contributed 79 (74%). 210 (96%) received formula feeding, of whom 103 (49%) were still receiving formula at time of interview. 107 (49%) infants received cows milk under one year of age, three of whom received low fat milk. The mean age of commencing cows milk was 31 weeks. Fourteen (82%) of the seventeen mothers who commenced cows milk before 26 weeks were from social classes 4, 5 and 6. Standardised infant feeding guidelines are urgently needed for Irish Mothers.

#### NUTRITIONAL INTAKE OF MENTAL HANDICAP PATIENTS IN HOSPITAL CARE

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**Objective:** To determine the nutritional intake and nutritional status of a group of mentally handicapped people living in hospital care.

**Design:** A semi-weighted dietary survey of a random sample of inpatients. Body Mass Index, activity level, degree of handicap, drug treatment and dental status were also assessed.

**Sample:** A random sample of 86 patients, 31 females and 55 males, in the age group 19 - 80 years.

**Results:** The dietary intake of major nutrients was similar to that of the general population in Northern Ireland. The polyunsaturated to saturated fatty acid (P:S) ratio was low, as were intakes of fibre, folic acid and zinc. The incidence of underweight in males was significantly greater than in the local population (Chisquare value of 16.62  $p < 0.05$ ).

**Conclusion:** Although there is considerable debate about the accuracy of surveys on nutritional intake, this study has shown that there is a need for greater monitoring of the nutritional intake and status of mentally handicapped people living in hospital care.

#### SEASONAL VARIATION IN PLASMA CHOLESTEROL - FOUR YEAR RESULTS FROM AN INDUSTRIAL SCREENING PROGRAMME

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Seasonal variation of plasma cholesterol has been reasonably well documented in the past, although there is no known aetiology or understanding of the mechanism of the seasonal pattern in human cholesterol. The Irish Heart Foundation's unit screened 28,000 volunteers from industry, in this study which examines the results from 1986 to 1989. The cholesterol level is estimated from a whole blood sample taken in non-fasting subjects. The same laboratory and method of analysis was used throughout the study.

Results for each of the four years were pooled and a mean monthly analysis of the cholesterol trend was plotted. The cholesterol levels varied from a high of 5.9 mmol/L in January to a low of 5.3 mmol/L in June. These results indicate that there may be implications for the clinical interpretation of cholesterol, especially in borderline cases where different treatments are being considered. Serial estimations of cholesterol may therefore be indicated over a period of months for certain subjects.

#### CORONARY RISK FACTORS AND EDUCATION IN MEN AND WOMEN

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Coronary heart disease (CHD) is only partly explained by the known determinants of risk. Marmot has suggested that, in addition to risk factors such as plasma cholesterol, hypertension and smoking, employment status is a strong predictor of CHD. Many studies have reported variations in cardiovascular mortality between different occupational and social groups.

Raised plasma cholesterol is accepted as a major risk factor and this has implications for nutritional policies, as well as for the clinical management of hypercholesterolaemia. The relationship between cholesterol and socio-economic or education class also has major implications for the prevention of coronary heart disease. The present study examines the distribution of plasma cholesterol by age, sex and educational status in 31,086 Irish subjects.

Between 1980-1988, 31,086 volunteer subjects were screened as part of an industrial health programme. In this study plasma cholesterol, weight, blood pressure and smoking are reported. Education class was subdivided into completed primary, secondary, tertiary technical (T) and tertiary university (U) categories. Education class was employed as the most easily measured index of social class.

Results show significantly raised risk factors in those who stopped at primary level, with lesser increases in those reaching second level. Third level subjects fared better in terms of risk factors.

#### ABUSE OF ANABOLIC/ANDROGENIC STEROIDS - A PUBLIC HEALTH PROBLEM?

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The use of anabolic/androgenic steroids by athletes, bodybuilders and recreational users has been reported in the United States (where 6.6% of male senior high school pupils in

one study had "ever used" steroids'), Great Britain and Northern Ireland<sup>2</sup>.

Research on this topic is difficult as steroids are often distributed by gym owners (with considerable profit) who will neither discuss the subject nor allow access to their clients. Steroid users don't have access to appropriate literature about side-effects of their habit on health.

In our Board, we were alerted to steroid use by body-builders using needle exchange facilities established for use of injecting drug users. Discussion took place between ourselves, steroid users and gym owners and the pattern of local steroid use established; this includes sharing of injecting equipment and taking a wide variety of drugs including amphetamines. Using focused group discussions among bodybuilders, health education material is being developed and advice made accessible to users. This paper discusses the epidemiology of recreational steroid abuse and explores the difficulties in developing educational material for this group of clients.

#### References

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#### PENETRATION OF THE KILKENNY HEALTH PROJECT EDUCATION PROGRAMME

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The Kilkenny Health Project (KHP) was established as a community-based research and demonstration programme for the prevention of cardiovascular disease and involved a comprehensive health education programme which ran from 1985 to 1990.

The penetration achieved through individual components of the intervention programme was as follows: newspaper articles - 23%, Catch, the project newsletter - 28%, leaflets - 67%, the RHP cookery book and videos - 29% and 7%, local meetings - 12%, the schools programme - 49%. Television and national radio achieved 29% penetration each and local radio achieved 46%.

Awareness was highest among females, the older age groups, the higher social classes, and those in full-time employment, working at home or in retirement. However no sex or social class differences were seen for radio or television and penetration was equal over the age and employment groups.

The varying abilities of different components of the KHP education programme to achieve a penetration of the community have important implications for health promotion. In particular the success of radio and television to overcome the social class barrier is noteworthy.

#### FOLLOW-UP OF A COHORT OF INTRAVENOUS HEROIN USERS IN NORTH AND SOUTH CENTRAL DUBLIN AND IN DUN LAOGHAIRE

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Three studies of intravenous heroin abusers in electoral wards in the North and South of Central Dublin and in Dun Laoghaire, were undertaken in 1982-1984. Since then 101 out

of 203 intravenous heroin injectors who were found in these three studies are known to have been tested for infection by the Human Immunodeficiency Virus (HIV) and 87 or 86%, are HIV positive. The heroin abusers in this study were, in the main, unemployed, belonged to the lower socio-economic group, and most of them lived in municipal flat complexes. More than one-third had been in prison, generally for stealing. Ninety-two of the 203 in the study had also been tested for Hepatitis B infection (HAB) between 1979 and 1982 and 76 of the 92 were positive for the hepatitis antigen. On re-examination today, some of the blood taken for hepatitis testing ten years ago is positive for HIV infection. Intravenous drug abusers and their children are the major group with HIV antibodies in the Republic of Ireland.

#### REPUBLIC OF IRELAND

##### HIV POSITIVE

	October 1991	September 1992
Intravenous drug abusers	616	676
Children at risk	76	84
Prisoners	13	13
Haemophiliacs	112	113
Homosexuals	181	221
Blood Donors	15	17
Heterosexual or Unspecified	123	158
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	1136	1282

#### ACCIDENTAL DEATH IN CHILDHOOD IN NORTHERN IRELAND

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This study examines the epidemiology of childhood accidental death in Northern Ireland over a five year period.

Injury is a leading cause of premature death, but the importance of a public health problem lies not just in the burden it imposes on society nor the toll it may exact in terms of death or disability but also in the extent to which it can be prevented. With the identification of sequences of factors, evidence suggests that accidents can be prevented by specifically direct countermeasures.

The pattern of accidental death in childhood in Northern Ireland differs from that in other countries with a higher proportion of these fatalities from pedestrian accidents, especially in the younger age groups. There is a distinct pattern of accidental death in young infants that is not similar to other pedestrian deaths. There are also a disturbing number of accidents to children of farming families and an unexplained higher rate of death from fires in girls. The pattern of deaths in young cyclists is also different, with a much higher proportion of deaths in younger children in N.I. The deaths from drowning include a higher proportion of deaths in the sea than is seen elsewhere.

#### SMOKING IN PREGNANCY: KNOWLEDGE, SOURCES OF INFORMATION AND IDEAS FOR QUITTING

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A cross-sectional study was carried out on pregnant women attending the antenatal clinic of a Dublin maternity hospital to obtain information about factors relevant to the development of

a health education programme for pregnant women. A self-administered questionnaire was returned by 1224 women. The prevalence of smoking in the current pregnancy was 58.7%. Questions about knowledge of the effects of smoking in pregnancy evoked many unsure and incorrect responses, the rate of correct replies being significantly higher from non-smokers than from smokers. Magazines, books and leaflets were the most commonly perceived source of information about the hazards of smoking in pregnancy for both smokers and non-smokers. Only 46% of smokers had heard about the hazards of smoking in pregnancy from the general practitioner, 40% from the hospital doctor, and 29% from a hospital nurse. In response to suggested ideas for smoking cessation, the most favoured ideas for both smokers and non-smokers were the use of educational videos, banning smoking from more public places, more support from family and friends, and the partner quitting. Non-smokers were more likely than smokers to think that each idea would help. These results will be used in making recommendations for setting up a programme aimed at reducing smoking in pregnancy.

#### A PROFILE OF THE HEALTH AND WELFARE STATUS OF YOUNG URBAN SINGLE MOTHERS

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In late 1991 a study of single mothers 17 years and under, who gave birth in 1989, was carried out in Dublin. The study aimed to examine the special health and welfare needs of single mothers and their children. Using a central register of births for 1989, all single mothers 17 years and under were identified. Exclusion criteria were: subsequent marriage of mother, relocation outside Dublin or adoption or long-term fostering of child. Data was collected by means of interviewer administered questionnaire. Out of 189 eligible mothers, 165 (87.3%) participated in the study. 133 (80.6%) were from social class 4-6. Forty-two (25.5%) mothers had two or more pregnancies. Fifty-one (30.9%) reported the existence of another "single parent" in their immediate family and this group are more likely to have two or more pregnancies ( $p < 0.001$ ). Only 11 mothers breastfed their babies. While 163 (98.8%) attended ante-natal care, 56 (33.9%) failed to attend post-natal care. Ninety-five (57.6%) mothers smoked cigarettes and 116 (70.3%) took alcohol during pregnancy. Only 17 (10.3%) respondents were using contraception when they became pregnant while 66 (40.0%) were using contraception when surveyed. This study identifies a range of health and welfare needs that require addressing in this vulnerable age-group.

#### TEENAGE PREGNANCY: BIRTHS, BROOK AND BANNERS

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In recent years, Northern Ireland has experienced substantial improvements in both the perinatal and infant mortality rates with the result that other indications of maternal and child health, such as teenage pregnancy rates are increasingly becoming the focus of attention and target-setting. In Northern Ireland in the 1980's the age-specific fertility rate amongst teenage women rose from 27.1 per 1000 in 1981, to a peak of 30.7 per 1000 in 1988. There is evidence of a substantial geographical variation throughout the Province with higher rates in the Eastern Board

especially in poorer urban communities where approximately 1 in 10 births is to a teenage mother. Similarly the reported abortion rate amongst Northern Ireland teenagers rose steadily throughout the 1980's. The public health strategy of response to the problem is broad-based and encompasses both educational and contraceptive approaches. The development in Belfast of a counselling and contraceptive service aimed at young people has been the subject of intense public debate and conflict which has interesting historical echoes. This public health care report on the topic of teenage pregnancy illustrates the importance of analysis of routine data sources, the development of effective strategies and the central role of advocacy skills.

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#### THE KILKENNY HEALTH PROJECT: CHD RISK FACTORS IN 1985 AND 1990 COHORT SURVEYS

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The Kilkenny Health Project is a research and demonstrative programme for cardiovascular disease prevention. A Cohort of 792 men and women aged 35 to 64 years were surveyed in 1985 and in 1990 to estimate changes in factors associated with coronary heart disease (CHD). Survey methods conformed to those used by the WHO MONICA Project. Despite increasing age, mean serum total cholesterol increased by only 0.2%, with a 1.3% increase in males and a 1.1% decline in females. Prevalence of regular cigarette smoking declined from 26.5% to 21.0%; the decline was greatest (9.1%) in the youngest males and least, with no change, in women in the same age group. With the exception of the women who were 55 to 64 in 1985, the mean systolic blood pressure (BP) declined in each age/sex group. Overall, the change was -2.6 mm Hg in men and -0.6 mm Hg in women. Mean diastolic BP increased by 0.2 mm Hg in men and decreased by 0.2 mm Hg in women. Changes occurred in a similar direction and were of similar order of magnitude in all social class groupings. Overall the findings are consistent with a reduction in CHD risk, given the 5 year increase in age between the two surveys.

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#### TRENDS IN ORCHIDOPEXY IN THE IRISH REPUBLIC, 1978-1988

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Orchidopexy is mainly a paediatric surgical procedure to correct undescended testis. Secular trends in orchidopexy were studied using Hospital In-Patient Enquiry data which were adjusted to allow for incomplete coverage of this information system. In the 0-14 age-group the orchidopexy rate increased by 73.1% from 237.5 per 100,000 in 1978 to a peak of 411.1 per 100,000 in 1987. There were considerable variations between the 0-4, 5-9 and 10-14 age-groups in the orchidopexy trends with the largest increase being recorded in the 0-4 group. Trends in orchidopexy during this period were similar for Irish and Scottish children. There were marked differences in the trends between Dublin residents and those living in the rest of Ireland. The ratio of the rest of Ireland: Dublin orchidopexy rate was 0.91 in 1978 and 1.83 in 1988. Consideration of the main sources of variation in surgical rates over time and between geographical areas - differences in disease incidence, availability of medical care, clinical opinion on diagnosis and treatment, patient de-

mand and data validity did not provide definitive explanations for our results but raised important questions notably about the appropriate use of this operation.

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#### A STUDY OF THE EPIDEMIOLOGY OF HAEMOPHILUS INFLUENZAE TYPE b INFECTIONS IN IRISH CHILDREN - THE FIRST SIX MONTHS

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Haemophilus influenzae type b (Hib) causes a number of serious diseases such as meningitis, acute epiglottitis and others. This 2 year study aimed to establish incidence rates and epidemiology of invasive Hib disease in Irish children which to date are not available. This data will aid decision making on the necessity for Hib vaccination in Ireland. In October 1991 a prospective case-control study of Hib disease commenced in Ireland. Microbiologists notify culture confirmed Hib isolates. Paediatricians provide clinical and epidemiological data on cases and public health doctors provide data on matched community controls. A profile of Hib cases occurring in the first six months of the study is presented here. Between October 1991 and March 1992, 36 cases of Hib disease occurred throughout Ireland. Seventeen (47.2%) cases occurred in the Eastern Health Board and eight (21.0%) in the Southern Health Board. Twenty-four (66.6%) were older than one year. Thirteen (36.1%) cases of meningitis occurred and 22 (61.1%) had septicaemia alone. One child had Hib isolated from a knee joint aspirate. Eight (22.2%) isolates were resistant to ampicillin. Noteworthy features of these preliminary findings are the geographical distribution of Hib disease and the high level of ampicillin resistance. This study also illustrates a model of multidisciplinary cooperation necessary in health care research.

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#### LOW IMMUNISATION COVERAGE RATES; FACT OR FICTION?

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In 1991, a study was undertaken to document the primary immunisation coverage rate in a deprived area and identify and examine the reasons for non-compliance. Using the birth register in Community Care Area 3 for 1989, all children born in the inner city in that year were identified. Exclusion criteria included: subsequent deaths, children who have moved out of the Eastern Health Board area and children who had subsequently been taken into care. An interviewer-administered questionnaire was the method used for data collection. Two hundred and seventy (90%) were interviewed out of 299 eligible mothers. The overall coverage rate for primary immunisation at the age of two years was 57.4% with a pertussis uptake of 45.7%. Vaccine coverage rate was strongly correlated with higher social class, a first child, non medical card eligibility and mothers' educational attainment. Thirty two percent of mothers in the non uptake group and 43.5% in the non completion group cited apathy as the reason for non compliance. The main reason for choosing diphtheria and tetanus immunisation rather than diphtheria, tetanus and pertussis immunisation was a fear of side effects (53.7%). This study reveals the low primary immunisation coverage rate in a deprived inner city area and highlights factors which may affect this coverage rate.

## THE RALAHINE COMMUNITY: AN IRISH GAMBLE?

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After the success of New Lanark, Robert Owen turned his philanthropic zeal to the establishment of model communities. A total of nine communities resulted and one of the most successful was at Ralahine, Co. Clare on the estate of John Scott Vandeleur. It lasted from 1831-1833 and in many ways was uniquely successful. Discipline was strict and drinking, smoking and gambling were forbidden. The Community was innovative: it introduced the first reaping machine into Ireland; had a "very convenient apparatus" for washing and boiling potatoes; and built a monumental and ingenious ash-closet, which it is claimed protected the community from the ravages of cholera in 1832. The lavatory was the invention of E. T. Craig who won a silver medal for his inventions at Cambridge in 1873. The ash-closet, suitably developed, went on to form the basis of the sewage disposal system adopted in several English cities such as Manchester. A modern analysis sees Ralahine as a most successful experiment in communal living and social equality but it was not a self-generated cooperative. Unfortunately its brief life was ended through the profligacy of Mr. Vandeleur. He gambled away the estate in his Dublin club and then fled the country. Family tradition has it that he became a locomotive engineer in America.

## CONTAMINATION OF A PUBLIC WATER SUPPLY

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In October 1991 an episode of sewage contamination occurred affecting the water supply of approximately half the population of a town of 11,000 people. A two-part study was carried out to determine the health effects of the episode including:

- 1) Level of and features of illness were established by self-administered questionnaires.
- 2) Salivary antibody testing was used to determine the prevalence of immunity to hepatitis A and to establish if evidence existed of an outbreak of hepatitis A associated with this water contamination. Using the electoral register, a random sample of 200 households was selected, and each household member was included in the sample. Questionnaires were completed by 560 individuals, half of whom lived in the exposed area. 61% of the sample (340/560) met the case definition for illness. The attack rate for those living in the exposed area was 77%. The most common symptoms were abdominal cramps (80%), diarrhoea (75%), loss of appetite (69%). The illness lasted a mean 7.4 days. Two cases were admitted to hospital. Analysable salivary samples for hepatitis A testing were submitted by 496 individuals. The prevalence of immunity to hepatitis A from past infection was 42.9% (213/496). Only four subjects showed evidence of recent infection. This study, while documenting a high level of illness, confirmed the absence of an outbreak of hepatitis A associated with this episode.

## THE NORTHERN IRELAND HEALTH AND ACTIVITY SURVEY

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The Northern Ireland Health and Activity Survey is a major

study of aspects of health related activity, measured fitness and related blood investigations. It comprises a questionnaire, physical appraisal and fasting blood sample. A random stratified sample of the population was made using the local government and rating valuation lists. Each address was visited by an interviewer and an extensive questionnaire was completed. All respondents were invited to take part in a physical appraisal at a mobile laboratory situated at strategic hospital sites. Respondents were also visited by the Project Nurse who took a 20 ml blood sample after a 12 hour fast. 517 addresses have been visited to date. There were 77 invalid addresses which were excluded leaving a sample of 440. Of this sample 81% completed the questionnaire, 52% participated in the physical appraisal and 56% had blood samples taken. Of those who agreed to participate in the physical appraisal 185 took part in the full test including sub-maximal treadmill testing with ECG monitoring and oxygen uptake measurement. Where respondents were old, a home appraisal was conducted. Medical examinations were carried out on all respondents reporting a medical history but the number of these was higher than anticipated.

## LOCAL LIFESTYLE SURVEYS - DO THEY TELL US ANYTHING WE DON'T ALREADY KNOW?

P. Kilbane.

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Lifestyle is commonly used by health professionals to describe features of our behaviour and attitude which may have either a beneficial or deleterious effect on our health. To find out about the extent of many of these behaviours and attitudes among its resident population the Southern Health & Social Services Board conducted a "Lifestyle Survey". To achieve representative information and a reasonable response rate, the most appropriate design of the survey was thought to be a face to face interview of 1% of the population. This meant a considerable outlay of resources, not just in financial terms, but in the time and personnel needed to collate and analyse the results and to write a report of the survey.

The rationale for carrying out a local survey was to:-

1. Provide timely information co-incident with the 1991 census.
2. Set accurate baseline for targets for the Regional Strategy 92-97 to formulate priorities.
3. Extend knowledge of population health in the light of the new General Practitioner contract with its increased preventive activities.
4. Engage the community in participation in health related matters, so that they would own the findings.
5. Demonstrate the importance of health promotion and attract additional resources.

The survey had 2,000 respondents and cost in the region of £52,000. The benefits were as follows:-

1. Provide widespread publicity about local lifestyle and habits.
2. Established the case for increased funding of Health Promotion initiatives resulting in a gain of 25% in the Health Promotion budget recurrently.
3. Provided data to prioritise health promotion interventions resulting in a Business Plan.
4. Provided a mandate from the Public for important health measures such as a ban on smoking in public places.
5. Enabled development of many intersectoral initiatives with other statutory and voluntary agencies and employers.