

From the Revue d'Epidémiologie et de Santé Publique

No. 1—1977 January-February

Editorial

E LEVY

Viewpoint

G CALOT

The decline of fertility in Western Europe. II. Which fertility rate is desirable in France?

Original articles

A CALAME, L S PROD'HOM and G VAN MELLE

Outcome of infants of very low birthweight treated in neonatal intensive care unit

D HEMON, C BERGER, J DREYFUS and P LAZAR

Distribution of birth weights and Influenza epidemics

Reports

R LANG and D RAMACIOTTI

Functional bucco-dental restoration cost for adolescents aged 16 to 20 in the Geneva resident population (Survey 1970-1972). First part: Description of estimates

A J TUYNS, C M JENSEN and G PEQUIGNOT

The difficulty of choosing a good control group in a retrospective study

News

Summaries of Periodicals

Summaries

OUTCOME OF INFANTS OF VERY LOW BIRTHWEIGHT TREATED IN NEONATAL INTENSIVE CARE UNIT

A CALAME, L S PROD'HOM and G VAN MELLE

Service de Pédiatrie, CHUV, 1011 Lausanne, Suisse

The neonatal survival rate of 500 VLBW (≤ 1500 g) treated in the neonatal unit of the *Department of Paediatrics* in Lausanne (CHUV) was studied according to changing patterns of nursing and medical care occurring in four successive periods (I—1961-IX—1963, X—1963-1965, 1966-1968, IV—1971-1973). The survival rate at 28 days increased from 35.5 per cent to 47.7 per cent between 1961 and 1965. Earlier start of feeding, intravenous fluid therapy, better control of ambient temperature and better oxygenotherapy are the main changes during this period. Further improvement in neonatal care did not affect the 28 day survival rate.

213 VLBW out of 500 (42.6 per cent) survived at 28 days, 13 (6.1 per cent) out of these died within the first two years of life, 36 (16.9 per cent) were lost for the follow-up. The remaining 164 VLBW were followed until ages between 18 months and 8 years. The improvement in neonatal care was associated with a decrease in the incidence of major neurological sequelae from 21.1 per cent to 12.2 per cent between 1961 and 1973. Cerebral palsy and epilepsy are responsible for this decrease. The incidence of mental retardation (DQ or IQ < 80) also decreased from

17.5 per cent to 4.9 per cent during the same period. However, the incidence of retrolental fibroplasia remained stable. The outlook for VLBW infants is now much more encouraging. Further improvement in perinatal care is likely to further reduce the incidence of major handicaps, but it is not clear whether they will affect the incidence of minor problems such as learning difficulties or poor school performances. More prospective studies are necessary to clarify these points and to ensure early detection of these developmental problems.

DISTRIBUTION OF BIRTH WEIGHTS AND INFLUENZA EPIDEMICS

D HEMON, C BERGER, J DREYFUS and P LAZAR

Unité de Recherches Statistiques de l'INSERM, 16 bis, Avenue Paul Vaillant Couturier, 94800 Villejuif, France.

The possible consequences of influenza during pregnancy on the weight of the new born were studied. It was shown that the major 1969-70 winter influenza epidemic in Alsace was followed by a decrease in the mean birth weight registered in Haguenau's maternity hospital. This study confirms previous work on the subject and shows that birth weight can be used as a valuable tool at the epidemiological scale.

THE DIFFICULTY OF CHOOSING A GOOD CONTROL GROUP IN A RETROSPECTIVE STUDY

A J TUYNS, O M JENSON, and G PEQUIGNOT

Centre International de Recherche sur le Cancer, Service d'Epidémiologie et de Biostatistique, 150 Cours Albert Thomas, F 69008 Lyon, France.

The choice of either hospital or population controls in retrospective studies is guided by rules implying underlying hypotheses.

In a study on oesophageal cancer in relation to alcohol and tobacco consumption, two such control groups were available and were compared. It was found that some of the currently accepted assumptions relating to representativeness of cases or controls were verified but many others were not, particularly in hospital controls. These were found to give less correct estimates of drinking and smoking habits than those obtained from population controls. The limitations in the use of either type of controls is discussed, in relation to the purpose of the study concerned.

FUNCTIONAL BUCCO-DENTAL RESTORATION COST FOR ADOLESCENTS AGED 16 TO 20 IN THE GENEVA RESIDENT POPULATION (SURVEY 1970-72). DESCRIPTION OF ESTIMATES

R LANG and D RAMACIOTTI

Institut universitaire de médecine sociale et préventive 20 Quai Ernest Ansermet, 1205 Genève, Suisse.

In 1970/72, a random sample of 1392 adolescents of the population irrespective of nationality and sex has been drawn, using computer equipment, from the Geneva (Switzerland) resident population, ages 16 to 20 years. The sampling fraction was 13 per cent. These adolescents were interviewed for case history, and then underwent clinical, radiological and photographic examination by a medically trained team including a dentist and a dental hygienist. The sampling had been designed so as to avoid selection regarding the adolescents' sex and occupation (student/apprentice/young labourer) or the parents' socio-professional category. Comprehensive epidemiological data concerning the main dental and periodontal diseases are thus recorded to allow estimation of the individual cost for a complete functional restoration of the dentition and the periodontium (orthodontic treatments not included). The estimating arithmetic is performed on the computer by means of an original program worked out especially for cost estimation referring to an approved list of fees for medico-dental treatments. The first part of the article, as published below, reports the relative frequency distributions of estimated cost depending on age, sex and occupation separately as well as jointly. Moreover, these distributions are summarized by their basic descriptive statistics (medians, quartiles, ranges, extreme values, etc). At first sight, it seems that by and large the median cost is higher for boys than for girls, and that there is evidence for an increasing trend with respect to age: young labourers rank somehow between students and apprentices. The data seem to exhibit a decreasing trend of median cost as regards ascending socio-professional category. Besides this trend is maintained when duration of caries prophylaxis by means of fluorine tablets intake is accounted for. Average number of daily tooth brushings also positively correlates with median cost, whereas the latter does not seem to depend very closely on time elapsed since the latest appointment with the adolescent's dentist. In another connection, the present paper indicates the overall cost (as well as cost for certain treatment subgroups) estimated for the sample on the one hand, for the whole population on the other hand.