

contain the increasing trend of Long-term Care Insurance (LTCI) expenditure for the care of aged people with disability. Although the proportion of the budget expenditure for HSDP varies among municipalities, it has been unclear whether these differences are related to the containment of LTCI expenditure. The objective of this study was to examine whether there is some relationship between the proportions of budget expenditure for HSDP and LTCI in all of the municipalities in Japan.

**Methods** 1640 municipalities were categorised into five groups according to the mean budget expenditure for HSDP per resident aged  $\geq 65$  years in 2006–2008 ( $<£5$ ,  $£5-£7$ ,  $£7-£9$ ,  $£9-£11$ ,  $\geq£11$ ). The rate of increase (%) in LTCI expenditure from 2006 to 2008 was calculated in each category. One-way analysis of variance was used.

**Results** The rate of increase in LTCI expenditure differed significantly between expenditure categories for HSDP (120.7 %, 120.4 %, 119.0 %, 118.5 %, 117.0 % from the lowest group [ $<£5$ ] to the highest group [ $\geq£11$ ] respectively;  $p < 0.001$ ). These differences were mainly attributable to significant inverse correlation between budget expenditure for HSDP and the rate of increase in fraction of those who use formal care under LTCI.

**Conclusion** Municipalities with higher budget expenditure for HSDP have a lower rate of increase in LTCI expenditure, suggesting that HSDP would be a cost-effective service.

#### P1-357 STATISTICAL ANALYSIS OF SPATIAL SURVIVAL DATA AND ITS APPLICATION TO THE COHORT STUDY OF HIROSHIMA ATOMIC BOMB SURVIVORS

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**Introduction** While there are considerable studies on the relationship between the risk of disease or death and direct exposure from the atomic bomb, the risk for indirect exposure caused by residual radioactivity has been ignored. One of the reasons is that risk assessments have utilised estimated radiation dose but it is difficult to estimate indirect exposure. To evaluate risks for indirect radiation exposure as well as direct exposure, we developed a statistical method that evaluates risk with respect to individual location at the time of atomic bomb exposure instead of radiation dose.

**Methods** Subjects for analysis were selected from the ABS database of the RIRBM at Hiroshima University. The number of death from all causes was 9641 and the number of censoring was 21 414. The follow-up period was from 1980 to 1997. Mesh coordinates of 100 m in width were used to define location. Sex and age at atomic bomb exposure were used as covariates. Applying the proposed method to the data, we estimated the location-specific risks for direct and indirect exposure.

**Result and conclusion** The contour of estimated risk showed that the north-west region has higher risk compared to other areas. The resultant risk map, excluding the risk for direct exposure, still has contours skewed towards the north-west direction. These suggest that there exists an impact on risk that cannot be explained by direct exposure. The shape of the risk map, which is skewed towards the north-west direction, might be due in part to Black Rain.

#### P1-358 RECORD BASED DATA EVALUATION OF 108 -EMERGENCY RESPONSE SERVICES- A HELP TO KNOW THE PATTERN OF EMERGENCIES IN MADHYA PRADESH

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**Introduction** GVK EMRI (GVK Emergency Management and Research Institute) is World's Largest Integrated Emergency Response Services (ERS) Provider. It is not-for-profit professional organization operating in the Public Private Partnership (PPP) mode. This is a free service delivered through state-of-art emergency call response centers and has over 2000 ambulances providing necessary professional pre-hospital care while transporting the victim to the nearest hospital. In our state it was launched on 16 July 2009.

##### Objectives

1. To determine the type of emergencies reported by 108-ERS.
2. To determine the proportion of emergencies brought to medical college hospital by 108-ERS.
3. To determine the impact of 108-ERS on emergency medical services.

**Methods** Type of study- Record based data evaluation.

Study area: Four Districts of M.P.

Research period- 1 August 2010 to 31 August 2010.

Tools and techniques: Review of secondary data from 108-ERS, Jabalpur and MRD of NSCB Medical College, Jabalpur.

**Results** 74 557 individuals get benefitted in M.P. till 31 July 2010 from the launch. Out of which 25 000 (33.53%) were pregnancy related emergencies, followed by 16 986 (22.78%) of road traffic accidents and 6 494 (8.7%) were of acute abdomen. About one tenth of total emergency cases seen in emergency department of NSCB Medical College, Jabalpur were brought by 108-ERS. Above 6000 lives saved by this 108- Emergency response service in Madhya Pradesh.

**Conclusion** Record based data are a great help to formulate policies and strategies to improve the health services in any state or country.

#### P1-359 PUBLIC OPINION OF CHILDCARE PROVIDERS IN ALBERTA, CANADA

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**Objective** To assess public opinion about, and interactions with, childcare providers and programs.

**Methods** Between September 2007 and March 2008, 1443 randomly selected adults living in Alberta, Canada, completed a telephone survey. Individuals were eligible to participate if they had interactions with a child  $< 14$  years of age in the past 6 months.

**Results** Of the respondents, 52% believed the government should cover between 40 and 60% of daycare costs, with 24% indicating more coverage and 23% indicating less coverage. Three-quarters (72%) indicated that childcare providers at daycare centres should have at least a college diploma. About 80 to 90% indicated that childcare providers were as central to children's development as elementary school teachers, with females and parents more likely to

believe this for some developmental domains ( $p < 0.05$ ). Overall, 32% of parents had sought information on child development and behaviour from childcare providers. Independent predictors of using childcare providers as a resource included having children under the age of 6 years (OR=1.65, 95% CI 1.11 to 2.46), having children in care for more than 6 h per week (OR=19.88, 95% CI 11.51 to 34.35), and being unmarried (OR=2.08, 95% CI 1.16 to 3.73).

**Conclusions** Among Alberta adults who recently interacted with children, there was support for public funding of childcare. Adults recognised that childcare providers play a critical role in supporting optimal child development and their beliefs about the need for education among childcare providers are in line with research evidence in the area. Policy and decision makers may find this information helpful in allocating resources to promote child development.

### P1-360 INCIDENCE OF STROKE FOLLOWING HERPES ZOSTER AMONG POPULATION 50 YEARS AND OLDER

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**Introduction** Although varicella zoster virus (VZV)-induced vasculopathy and stroke after herpes zoster (HZ) attacks have been previously reported, data regarding stroke frequency after zoster attacks are lacking. This study investigates the risk of stroke after HZ in a general population age 50 years and older.

**Methods** This is a retrospective cohort study of HZ cases who had received treatment for HZ from 1 January 2007 to 31 October 2010 at Kaiser Permanente Southern California. These cases had no records of stroke within 1 year prior to their index HZ diagnosis date. The comparison cohort included subjects who had no HZ during the same period and were matched 1:1 to the HZ cohort on age, date of HZ diagnosis, and the setting of medical care. Incident cases of stroke were identified from hospitalisation records with primary diagnosis as stroke.

**Results** There were 227 stroke cases in the HZ cohort and 224 in the comparison cohort. The 1-year Kaplan-Meier cumulative incidence of stroke was 0.88% (95% CI 0.77% to 1.00%) for the HZ cohort and 0.89% (95% CI 0.78% to 1.00%) for the comparison cohort ( $p$  value: 0.98). The HR of stroke after any HZ or herpes zoster ophthalmicus, after controlling for sex, race, heart diseases, diabetes, lung diseases, kidney diseases, liver diseases, hypertension, and demential status was 1.11 (95% CI 0.92 to 1.33) and 3.33 (95% CI 1.05 to 10.53), respectively.

**Conclusions** These data suggest that the risk of stroke following herpes zoster was increased in only those with ophthalmic involvement and not in subjects with HZ involved in distant dermatomes.

### P1-361 HISTORY OF CHILD ABUSE AND SELF-INJURIOUS BEHAVIOUR

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**Introduction** It is not well known what kind of health problems is associated with the history of child abuse. The aim of this study was to observe the current situation of child abuse in Japan, and to confirm our hypothesis that history of child abuse is associated with self-injurious behaviour.

**Methods** Data from the Lifestyle and Attitude towards Sexual Behaviour Survey were used for the secondary analysis. Using the

two-stage stratified random sampling method, 3000 people (aged 16–49) were selected throughout Japan. Visit custody investigation was conducted to collect each one's data, including general characteristics (gender, age, education, occupational status, marital status, tobacco use, and alcohol consumption), history of parents' divorce, history of child abuse, and self-injurious behaviour. The  $\chi^2$ -test and the logistic regression analysis were used to analyse the relationship between history of child abuse and self-injurious behaviour.

**Results** A total of 1540 participants (51%) were included in the analysis. Of these, 77 participants (5%) experienced child abuse. Also 108 participants (7%) had experience self-injurious behaviour at least once. Although 6% of the participants without the history of child abuse attempted self-injurious behaviour, 33% of the participants with the history did attempt self-injurious behaviour. History of child abuse was significantly associated with self-injurious behaviour in crude and adjusted model.

**Conclusion** We found that history of child abuse was associated with self-injurious behaviour. Public health workers and clinicians should pay attention to the future self-injurious behaviour in caring for child abuse.

### P1-362 CHARACTERISATION OF ABORTION CASES AT A PUBLIC MATERNITY IN NATAL, BRAZIL

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**Introduction** Legal abortions in Brazil are restricted to risk of maternal death and rape. The aim of this study was to characterise abortion cases at a public maternity in Natal, Brazil. Method: This is a quantitative descriptive study. The population included all adolescents and young adults (1554) hospitalised as a result of illegal abortions in 2007 and 2008.

**Results** Abortion accounted for 98% of emergency cases; mean age was 20 years; mean gestational age was 11 weeks; 93% denied induced abortion. The most common cause of hospitalisation was abdominal pain accompanied by haemorrhage (60%); incomplete abortion (74.4%); 60% underwent curettage and 40% manual intrauterine aspiration. There was a positive association between aspiration, higher gestational age and maternal age; one-day hospitalisation without complications or counselling (93%).

**Conclusion** There is a serious public health problem with high occurrence of abortions in progress and only emergency care.

### P1-363 THE IMPACT OF SCHOOL CLOSURE DURING THE A/H1N1 EPIDEMIC 2009 INFLUENZA PANDEMIC AMONG SCHOOLS IN JAPAN

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**Introduction** In Japan, the first infected person to the influenza(A/H1N1) was confirmed, May 2009, and spread widely, especially among children. Schools conducted various preventive actions under a general guideline by the local education board. School or class closure was one of them, which was decided by each school. However, it is not clear whether school closure is effective. The objective of the study was to examine the effectiveness of school closure.