

DDE), aldrin, dieldrin, endosulfan sulphate, heptachlor, heptachlor epoxide and methoxychlor. This was a cross-sectional study that involved farmers working in agricultural areas and using pesticides during the time of the study. Hair and urine samples were collected from farmers who gave their consent to participate in the study. Method development and validation of the respective pesticides using GC-MS were established, and levels of the pesticides determined.

**Results:** Eight (8) and 10 out of 12 OCPs under study were detected in the hair and urine samples respectively. In the hair samples, the highest mean concentration of pesticide detected was methoxychlor (3,389 ng/g) whilst p,p'-DDE was the lowest mean detected at 463 ng/g. OCPs namely  $\gamma$ -hch, heptachlor, aldrin and dieldrin were not detected. In urine, the highest mean concentration of pesticide detected was dieldrin (965 ng/g) whilst p,p'-DDE was the lowest at 221 ng/g.  $\beta$ -hch and aldrin were not detected. On weight to weight basis, higher concentration of OCPs was detected in hair as compared to those found in urine.

**Conclusion:** This study has developed an assay for simultaneous quantification of selected OCPs which is simple, cost-effective and non-laborious. After so many years, traces of persistent OCPs could still be detected in human biological samples showing that the threat to human health still exists and is real.

#### (7) New Role of Poison Center—the Quitline Service

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**Introduction:** Smoking can be defined as chronic poisoning from tobacco use among smokers. However, findings from recent study showed that more and more smokers have intentions to quit. Apart from the support from quit clinics, evidence shows that telephone-based smoking cessation service or quitline has been found to be effective in helping smokers quit. In Malaysia, until 2005, no other agency or organization has been known to offer quitline service. This prompted the National Poison Centre of Malaysia to take on a new role in providing the quitline service.

**Objective:** The purpose of this study is to share the experience on quitline service provided within a national poison center setting.

**Methods:** Quitline incorporates an innovative easy-to-use interview system known as the Smoke-Free Online System. A registered client will undergo a preparatory session a week before the quit date. The client will then receive four follow-up sessions that provides motivational support to sustain quitting. Since 1 January 2011, the quitline service has been piloted in Malacca in conjunction with the Malacca Smoke-Free Project. Under this project, all patients

who visit primary health care facilities in Malacca are screened for their smoking status. Smokers are then given brief advice and offered assistance to quit smoking.

**Result:** Twenty-six health clinics and three hospitals in Melaka have joined the program. Until June end 2011, a total of 152 clients have registered and 95 (62.5 %) are actively in the follow-up sessions. Five (5.26 %) clients successfully quit on the targeted date and maintained their abstinence after follow-up at 1 month. The remaining clients are still in contact to set new quit dates. Most of the clients prefer to be contacted after-office hours or during their lunch break.

**Conclusion:** The quitline service has potential for expansion as it is well received by the general public. It offers a convenient alternative for smokers who are unable to attend quit smoking sessions at quit clinics. Poison centers with limited funding could also adopt this new role as the service offered incurs minimal additional operational cost and infrastructure.

#### (8) Cases of Accidental Hydrocarbon Ingestion Referred to the Malaysian National Poison Center

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**Objective:** Hydrocarbons-based products are among the most common chemicals used in everyday life, thus a potential poisoning risk. Although most hydrocarbon products may not cause appreciable systemic effects but aspiration of hydrocarbons into the lungs can cause chemical pneumonitis which could result in moderate to severe lung injury. The aim of the study is to describe the pattern of accidental hydrocarbon poisoning reported to the National Poison Center (NPC) in Malaysia over a 4-year period.

**Methods:** All poisoning cases involving hydrocarbon-based products referred to NPC between 1 January 2006 and 31 December 2009 were evaluated retrospectively. Reviewed data took into account the following factors: incidence, time of exposure, age category, route of uptake, and location of incident. SPSS version 15 was used for descriptive analysis of the data collected.

**Results:** Of the total 2,237 poisoning cases involving household products, 496 (22.2 %) cases were attributed to hydrocarbon products with 69 % unintentional and 30.6 % intentional cases been referred. There was an upward trends in accidental cases referred to the center from year 2006 with 75 (15.1 %) to 190 calls (38.3 %) in 2009. More than half of these cases involved children. The highest incidence was poisoning involving kerosene (40.9 %) followed by thinner (32.2 %), petrol (23.1 %) and others hydrocarbon-based product (3.8 %). Majority of these poisonings happened at home (93.9 %), and ingestion (98 %) was the commonest route of exposure.