

MEETING ABSTRACTS

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O1

## An outbreak of typhoid fever at secondary school of Magelang district, Indonesia in 2016

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### Background

On October 15th, 2016, Magelang District Health Office (DHO) received a report from a school that some students had typhoid fever. Outbreak investigation was done to know the magnitude of outbreak, the cause, and describe the outbreak.

### Materials and methods

This research was a descriptive epidemiology study with active case finding to find additional cases. Data were collected by interview using standard questionnaire. The researchers took sample of clean water, drinking water and blood in school. Water sample and blood were sent to laboratory.

### Results

Total number of cases were 150 students. The highest attack rate was found among the first year students 139 per 381 (36.48%) and 72 per 359 females (20.1%). The onset of disease started from 28 September to 26 October. There was a bathing activity in the river at on 26 September that the students attended which was followed by eating together without washing hand with soap. IgM was positive in 51 students and water sample was negative for *Salmonella typhi*.

### Conclusions

There was an outbreak of typhoid fever with 150 cases in school on September to November 2016. The outbreak was caused by bathing activity in the river and not washing hand before eating.

O2

## Estimation of TB burden on districts and cities level in West Sumatra Province, Indonesia

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### Background

Indonesia is among the top highest TB burden globally with more than 1 million cases in a year and 690,000 not reported second highest TB burden globally. There were differences in the prevalence and incidence. There were differences in the prevalence and the incidence among regional and districts/cities. There was considerable variation between provinces and between districts / cities in the case of notification per 100.00 population. An estimate of burden of disease is required for planning and budgeting. The objective study was assessing estimation of TB burden districts and cities level in West Sumatra Province, Indonesia.

### Materials and methods

The estimation was conducted by using the results from TB prevalence surveys. Incidence was estimated by using measurements from national surveys of the prevalence of TB disease which were combined with estimates of the duration of disease. Incidence was estimated as the prevalence of TB was divided by the average duration of disease assuming epidemic equilibrium.

### Results

There was a marked difference in the estimation of TB burden between cities and districts. The estimated burden of TB in cities was higher than in districts. In the city, the incidence was estimated 650-670 per 100,000 population and the district was estimated 425-500 per 100,000 population. Several possible risk factors differentiated the allocation of TB Burden each city and district.

### Conclusions

High quality prevalence survey is needed to estimate TB incidence in order to allocate the national TB burden to each city and district in Indonesia.

O3

## Self-medication practice among senior high school students in Padang, Indonesia

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### Background

Self-medication is an act of people to select and to use medicines - both modern and traditional - for themselves to treat illness or sign and symptoms of illness without consulting to a professional health care. This practice is commonly used in the world. The study aimed to know the description of self-medication practice among senior high school students in Padang City.

### Materials and methods

The study was a cross-sectional study using a questionnaire as data collection instrument. The samples were taken by using stratified random sampling technique among senior high school students in Padang.

### Results

The results showed that the practice of self-medication was mostly done by female students (63.2%) and by mathematic and natural sciences students (59.5%). The main reason was the assumption that they did not suffer serious illness (44.4%). Sources of information on self-medication practice were mainly parents, relatives, or friends (63.8%). The medicine was mostly obtained from pharmacies (67.5%). The most frequent used drug was analgesic or antipyretic (54.6%), while few of respondents used antibiotics (4.0%). Most of the students used two or more medicines (64.1%). Furthermore, most of them did not read the brochure before using the medicine (62.0%).

adolescent age as well as to find the relationship between third molar eruption and age.

#### Materials and methods

This was a cross sectional study involving a sample of 300 male students aged 16-21 and 300 female students aged 17-19. An oral examination was taken for each visual clinical subject.

#### Results

This research reveals that the mean age of having complete clinically erupted maxillary third molars was 21.02 years in male subjects and 21.48 years in female subjects. While the mean age of having complete clinically erupted mandibular third molars was 20.23 years in male subjects and 21.03 years in female subjects.

#### Conclusions

This approach requires the target individuals to have regular dental reviews or 'checkups', so that the status of the wisdom teeth can be monitored to prevent further pathologic conditions later in life.

0122

#### The relationship of extra-familial system with sexual adolescent behavior in Padang City, Indonesia

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#### Background

Unmet fulfillment of adolescent needs for achievement, conformity, find identity, popularity, and sexually needs cause adolescent easy to fall into deviant activity. One form of deviant activity is risky sexual behavior. Based on the results of the Indonesian Demographic and Health Survey 2012, there was an increase in adolescent sexual behavior (21.6%) compared to 2007 data, with pregnancy rate, abortion, and on sexual transmission disease. This study aimed to determine the relationship of extrafamilial system with teenage sexual behavior in Padang City in 2017.

#### Materials and methods

The type of research was quantitative research, with cross-sectional design. Respondents were 158 high school students in Padang City. Sampling was through multistage random sampling technique, while the number of samples was done proportionally.

#### Results

Extrafamilial system was associated with adolescent sexual behavior, where the prevalence of adolescents with high-risk sexual behaviors was 3.8 times more likely to be found in peer influences (POR = 3.8, 95% CI: 1.47-9.91). Family system relates to adolescent sexual behavior (with 95% CI, value of communication communication with parent 1.97-23.48, parental supervision 1.37-7.16, family structure 1.21-8.10, family support 3.36-77.90). Family support was a confounder for relationship of peer influences to adolescent sexual behavior, adolescents with peer influences had an opportunity to engage in high-risk sexual behavior 5.6 times compared to adolescents who did not have peer influence after being controlled by gender variables and family support.

#### Conclusions

The results showed the influence of peers had a significant relationship with teenage sexual behavior. But peer influences can be controlled by maximizing family support (parents) in the form of informational support and emotional support. It is suggested to the Education and School Office to provide counseling and understanding to teenagers and parents related to sexuality issues, so that parents can monitor teenagers association for risky sexual behavior prevention.

0123

#### Public's knowledge and attitude of safety sign guide in safe behavior at railway crossings area in South of Tangerang and South of Jakarta

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#### Background

The high number of accidents caused by the lack of human resources railway operators, infrastructure at railway crossings, and the lack of discipline of road drivers. Safety signs at railway crossings area are important factors that affect the safety of drivers at railway crossings. This study was aimed to determine the Public's knowledge and attitudes towards safety sign guide in safe behavior at railway crossings area.

#### Materials and methods

This study was a qualitative research. The participants were drivers, pedestrians and railway operators at four busy highway-railway crossings areas in South of Tangerang and South of Jakarta, Indonesia.

#### Results

The results showed that driver's knowledge of the safety sign guide in safe behavior at railroad crossings areas still lacking and poor. Most of drives stated that they familiar with safety sign but they did not know the meaning of all safety signs guide. This study found that many safety sign were not feasible and less strategically located.

#### Conclusions

All parties need to pay attention to the behavior of drivers in the railway crossings and improvement is needed for safety sign guide that is not feasible and put it in a more strategic place.

0124

#### Effectivity of aerobic exercise to weight loss and waist circumference decrease in overweight adult students in Cimahi City, West Java, Indonesia

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#### Background

Indonesia has entered the top 10 rank of overweight worldwide with 19.6% (based on BMI) and 37.2% (based on waist circumference (WC)) prevalences in 2013. Weight loss is achievable with moderate intensity exercise in 30-60 minutes duration on most days of the week. This study aimed to analyze weight loss and WC decrease from nine times aerobic exercise in three weeks treatment program among overweight and obese adult students.

#### Materials and methods

Quasi-experimental design applied with one group pre and post test design. The population obtained from the screening overweight/obese in adult students. Samples were 17 students. Data were analyzed by t-test dependent and simple linear regression.

#### Results

Aerobic exercise significantly affected weight loss and WC decrease with consecutive results, weight loss mean was 2.69kg (95%CI: 2.84-3.73), WC decrease mean was 3.28 cm. Weight loss and WC decrease showed in moderate relationship with positive pattern (r = 0.35). As many as 12% of WC decrease explained by loss weight.

#### Conclusions

Moderate intensity aerobic exercise is appropriate to achieve weight loss and WC decrease in overweight or obese students.

0125

#### Inhibiting factors in reducing smoking behaviour on urban poor smokers

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#### Background

The number of smokers in Indonesia increased every year and smokers are dominated by the poor. Many factors can cause smoking behavior, among others are the influence of tobacco dependency which perceived positively by smokers. The aim of this study was to

analyze the inhibiting factors in reducing smoking behavior among the poor smokers in urban area.

#### Materials and methods

This was a qualitative study with descriptive approach. Fifteen informants were interviewed, they were poor people who have been smoked for a long time and worked in informal sector and lived in Mamajang District. Information was obtained through indepth interview.

#### Results

The results showed that it was very hard for poor smokers to reduce or change their smoking behavior. In this case, smoking could give comfort feeling that made them maintained the pleasure. Subjective feelings perceived by poor smokers became inhibiting factors in reducing smoking behavior.

#### Conclusions

The study concludes that the sense of comfort felt by smokers is become inhibiting factor in reducing smoking behavior.

O126

#### Effect of nitrogen dioxide (NO<sub>2</sub>), premature birth, and low birth weight against the recurrence of asthma in children based on residential area: a retrospective cohort study

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#### Background

One of contaminant that can cause an asthma relapse is nitrogen dioxide (NO<sub>2</sub>). The highest concentrations of NO<sub>2</sub> in the city of Padang was found in Lubuk Kilangan sub-district and low NO<sub>2</sub> concentration was found in the sub-district of Koto Tangah. Data of asthma cases taken from each primary health center in respective sub-district.

#### Materials and methods

The study was conducted with retrospective cohort study design, by which NO<sub>2</sub> exposure has occurred in the past and history of asthma relapse was followed from January to November 2014. Respondents were children  $\geq 7$  years old and had been suffering from asthma for at least 2 years at the time of research. The determination of sample location used spatial analysis. An assessment of dispersion towards the concentration of NO<sub>2</sub> at each location was conducted.

#### Results

The results showed a significant relationship between the concentration of NO<sub>2</sub> with recurrence of asthma in children (RR = 2,273; 95% CI = 1,307 - 3,951). There was no difference of gender in asthma recurrence among children in this area. Low birth weight (LBW) had significant association with asthma recurrence (RR = 1,681; 95% CI = 1,004 - 2,813). It was found that the relationship between the concentration of NO<sub>2</sub> and Asthma recurrence in children was strongly found among children with history of premature birth (RR = 1,895; 95%CI = 0,952 - 3,772). These results were obtained after controlled others variables in multivariate using Cox Regression.

#### Conclusions

Children who lived in exposed areas were at high risk of recurrence of asthma episodes than children who lived in non-exposed area. The relationship between the concentration of NO<sub>2</sub> and Asthma recurrence in children was strongly found among children with history of premature birth.

O127

#### The relationship of DPT immunization status with diphtheria based on geographic information system in Padang

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#### Background

This study was aimed to identify the effect of covariate variables (education, knowledge, and attitude of the mother as well as the density of occupancy bedrooms) to DPT Immunization status with

diphtheria in children under 15 years in the city of Padang based on Geographic Information System.

#### Materials and methods

A case-control study was conducted to the population of mothers of children under 15 years in the city of Padang whereby diphtheria cases (probable cases and confirmed case) were existed. The total of 102 samples were taken by simple random sampling, matched by gender, and region of residence. Controls were the closest neighbors with the cases. Data were collected through interviews by using questionnaires. Data were analyzed by using spatial analysis.

#### Results

Bivariate analysis showed that the DPT immunization status (OR=2,42 95%CI 1,00-5,85), mother's education level (OR=0,333 95%CI 0,12-0,9) and the density of bedrooms (OR=3,2 95% CI 1,17-8,7) were linked to diphtheria. While the knowledge and attitude of the mother did not have relationship with diphtheria and. Final multivariate modeling indicated that mother's education, mother's attitude, and density of bedrooms were confounders to the DPT immunization status and diphtheria.

#### Conclusions

Mother's education, mother's attitudes and density of bedrooms influenced the relationship status of DPT immunization and diphtheria. Thus, it is expected to the Local Public Health Center to improve health promotion about immunization and information regarding diphtheria, especially in the Kuranji Timur, Padang, and North Padang subdistrict.

P1

#### Comparison of Accuracy of Kinyoun Gabbet Stain and Lugol Stain to detect Soil-Transmitted Helminths

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#### Background

In Indonesia, the most frequent helminthiasis are those caused by intestinal infection with Soil-Transmitted Helminths (STH). STH includes *Ascaris lumbricoides*, *Trichuris trichiura*, and hookworms (*Necator americanus* and *Ancylostoma duodenale*). It can be readily diagnosed by detecting the helminthes eggs in stool samples by using microscopic techniques of Lugol stain. The most important for preventing of STH is an accurate diagnosis to prevent the transmission. The objective of this study was to compare the accurate concentration of formol-ether method with Kinyoun Gabbet stain and Lugol stain.

#### Materials and methods

A cross-sectional study was conducted on primary school children at SDN 27 Peusangan, Bireun Regency, Nagroe Aceh Darussalam (NAD) Province. The total samples obtained were 80 participants on February to June 2016. Statistical analysis was performed by Chi-square to compare accuracy between Kinyoun gabbet stain and Lugol stain.

#### Results

The result showed that sensitivity of Kinyoun gabbet stain was 84,62%, the specificity was 98,51% and its accuracy was 96,25% in detecting STH.

#### Conclusions

Kinyoun gabbet stain was more sensitive and specific in detecting Soil Transmitted Helminths compared Lugol stain in this study.

P2

#### Nutritional status, physical activity, and VO<sub>2</sub> max among male students in SMA Sutomo 2 Medan

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