

Abstract no. 49

Effect of Academic Services Integration with Teaching and Learning of General Education for Human Development Course on Volunteer and Happiness of Study among 1st Year Nursing Students of The Royal Thai Army Nursing College

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Background: The academic services integration with teaching and learning of general education for human development course on volunteer and happiness of study.

Objective: This study aimed to study the instructional integration on general education for human development course on volunteer and happiness of study among nursing students.

Methodology: Purposive sampling was used to recruit the sample. They were 84 of 1st year nursing students who participated in the basic study for human development course during September to November 2014. The instruments included Volunteer of nursing students questionnaire and Happiness of study questionnaire with Cronbach's alpha coefficient .95 and .92, respectively.

Results: Descriptive statistic (percentage, mean, and standard deviation) was used to analyze the data. The finding revealed that the average scores of volunteer and happiness were high in nursing students.

Conclusion: Instructional integration on basic study for human development course on volunteer and happiness of study among nursing students should be applied for using in further teaching and learning courses.

Keywords: ● *Instructional integration* ● *General education for human development course*
 ● *Volunteer* ● *Happiness study* ● *Nursing students*

Abstract no. 50**Practices in Preceptor's Role of Professional Nurses in the Training Places of The Royal Thai Army Nursing College****Jutarat Bandansin, Siriporn Poonchai, Saisamorn Chaleoykitti and Kusuma Kanglee***The Royal Thai Army Nursing College*

Background: The problems of the practices of nurse preceptors' role were over workload in routine task. In some unit had the professional nurses

Objective: The purpose of this study 1) to examine the practices of nurse preceptors' role for nursing students during Academic year 2013 2) to measure nurse preceptors' satisfaction 3) to study problems and obstacles on nurse preceptors' role.

Methodology: Data were collected from 234 nurse preceptors who worked in Bangkok and urban primary health care unit/hospitals, secondary hospitals and tertiary hospital which were the clinical sites of The Royal Thai Army Nursing College. The questionnaire had four parts including personal data, the practices of nurse preceptor's role, the satisfaction of the practices of nurse preceptor's role and the nurse preceptors' problems. Data were analysed by descriptive statistics and analysis of variances (ANOVA).

Results: The findings showed 1) the mean score of the practices of nurse preceptors' role are at high level ($\bar{X} = 4.33$ SD = 0.62). Considering in each role showed that nurse preceptors' highest on the role model ($\bar{X} = 4.56$ SD = 0.57) and the lowest on the evaluation of performance ($\bar{X} = 4.23$ SD = 0.61). Moreover, the practices of nurse preceptors' role were compared among nurse preceptor who had difference in work experience, preceptorship experience and work places. The finding indicated that there weren't statistical significant in the difference of the total practices of nurse preceptors' role. However, considering on each of practices of nurse preceptors' role were reported as follow: 1) the nurse preceptors who had worked experience more than 10 years had higher mean score of counselling role and role-model than the others who had worked experience for 2-4 years ($p < 0.05$) 2) the nurse preceptors who had preceptorship experience more than 7 years had higher mean score of counselling role than the others had preceptorship experience for 1-2 years ($p < 0.05$) 3) the nurse preceptors who worked in the primary health care unit/hospital had higher mean score of supportive-promoted role and role-model than the others in the tertiary hospital ($p < 0.05$). For the satisfaction of practices of nurse preceptors' role had the mean score at high level ($\bar{X} = 4.51$ SD = 0.581).

Conclusion: The problems of the practices of nurse preceptors' role were over workload in routine task. In some unit had the professional nurses who had worked experience below 3 year and weren't trained in the preceptor's program. Thus. They lacked confidence to teach and supervise nursing students effectively. Finally, the developed needs of nurse preceptors were teaching technique, nursing ethics and laws and evaluation methods.

Keywords: ● *The practices of nurse preceptors' role* ● *Nurse*

Abstract no. 51

The Efficacy of Progesterone in Treatment of Traumatic Optic Neuropathy. (PROTON Study)

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Background: Traumatic optic neuropathy (TON) is a rare but devastating ocular condition. Head injury and trauma of periorbital structures can directly injury to optic nerve or indirectly transmit force to the optic nerve resulting edema and ischemia. Treatment of TON is not been established. Steroid, optic canal decompression surgery and observation are found no clear benefit. Progesterone is one of the potent neuroprotective hormone and has been researched for treatment of traumatic brain injury with promising outcome.

Objective: To evaluate the visual function improvement by progesterone for treatment of indirect traumatic optic neuropathy

Methodology: A comparative historical controlled trial was conducted in Phramongkutklao Hospital during February to September 2015. Seven patients newly diagnosed with indirect TON were enrolled for progesterone group. Nineteen indirect TON patients were reviewed medical records for steroid group (N = 12) and observation group (N = 7). Patients in progesterone group were given Depot medroxyprogesterone acetate (DMPA) 1 mg/kg. intramuscular injection every 12 hrs. for 5 days and observed for side effects. All patients were examined and reviewed for visual acuity by ETDRS chart, color vision test by Ishihara test, visual field testing by Humphrey automated perimetry, fundus and optic disc examination at baseline, follow-up 1 week, 1 month and 3 months.

Results: Demographic and clinical characteristic of patients in 3 groups were not different in terms of age, sex, underlying disease, side of eye, type of injury, baseline visual acuity, associated orbital fracture, history of amnesia, time to visit hospital and time to start treatment. Improvement in best-corrected visual acuity (BCVA) compared at 3 months from baseline showed no difference between 3 groups (p-value = 0.891). Analysis within steroid group showed statistically significant improvement of BCVA at 1 and 3 months (p-value = 0.015, 0.028 respectively). No improvement was shown in color vision and visual field in progesterone group. Only better baseline BCVA was the protective factor for better visual outcome (p-value = 0.027, Odds ratio = 0.004, 95%CI: 0.000-0.537). No side effects of progesterone were found in the study.

Conclusion: Progesterone is a safe and promising neuroprotective agent. This study showed no difference among choices of treatment therefore study in larger population is required. Steroid remains an effective option contrast with recent studies.

Keywords: ● Traumatic optic neuropathy ● Progesterone ● Steroid ● Visual acuity

Abstract no. 52**Laboratory Diagnosis for Tuberculosis****Sompong Treewatchareekorn, Chaiwat Chottanaathiwat and Avika Holasut***Microbiology Laboratory, Army Institute of Pathology, Phramongkutklao Medical Center*

Tuberculosis (TB) continues to be a major health problem in Thailand and Worldwide. The prevalence rate of tuberculosis in Thailand is around 161 cases from 100,000 people and the mortality rate is around 9,800 cases per year. Among tuberculosis patients in Thailand, 1.7% is the new TB cases with Multi-Drug Resistance Tuberculosis (MDR-TB) and 10-20% are infected by Non- Tuberculous Mycobacterium (NTM), such as *M. avium* complex, *M. chelonae*, *M. fortuitum* and *M. abscessus*.

In order to control the disease, one of the effective ways is finding the infected persons and treatment as soon as possible. Microbiological Laboratory, Army Institute of Pathology, Phramongkutklao Medical Center have been developed to be an Excellence Center of Laboratory Diagnosis for Tuberculosis. Nowadays, our Laboratory can support a clinical to Diagnosis active TB patients and Latent TB patients. For an active TB, we use AFB Stain, Fluorescence Stain, TB culture and 1st and 2nd Drug susceptibility, PCR of TB and Line probe assay for MDR-TB and NTM. For latent TB, Interferon - gamma release assays (IGRA) such as Quantiferon TB Gold assay is available. At the present, we use a real-time PCR for TB, GeneXpert for more accuracy and rapid laboratory diagnosis. Types of specimens which can use with the machine, there are sputum and body fluid but excepted stool, urine and blood sample. The results will report within 1 day. As the information above, we can do a complete TB diagnosis from the primary screening to identification and testing for drug resistance, to help and support rapid treatment.

Keywords: ● Tuberculosis ● Multi-Drug Resistance Tuberculosis ● MDR-TB

● Non- Tuberculous Mycobacterium ● NTM ● Real-time PCR ● GeneXpert

Abstract no. 53

CRF01_AE Early Env Recombinant Viruses Neutralizing Susceptibility to Human Broadly Monoclonal Antibodies and Viral Entry

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Background: Transmitted/founder virus is responsible establishment of persistent viral infected population in early phase as well as induces anti-HIV-1 host immune responses. It reveals in the mucosa and transported into lymph nodes and lymphoid organs especially gut associated lymphoid tissue (GALT) which is the potentially viral replications related to high peak viral load enhancing selective pressure on specific immune responses in this region. Neutralizing antibody is the one effective humoral immune response to HIV-1 infection leading to clarify host immune response events, providing the characteristic antibodies and immunogens for vaccine development.

Objective: To study neutralizing susceptibility of CRF01_AE Env-recombinant viruses.

Methodology: We amplified HIV-1 *env* genes from sera derived from recently infected Thai individuals, and established an envelope of glycoproteins (Env)-recombinant viruses which were tested for their neutralization susceptibility to neutralizing human monoclonal antibodies (NHMAbs) and entry inhibitors.

Results: Fourteen Env-recombinant viruses were constructed to study phenotypic and genotypic *env* gene characterizations. There was one X4R5-tropism, whereas thirteen R5-tropism as well as were susceptible to neutralization by 4E10, 2F5 and IgG1 b12; they were 100% (14/14), 64% (9/14) and 35% (5/14), respectively. However, all fourteen Env-recombinant viruses were resistant to 2G12. Additionally, the amino acid residues and potential N-linked glycosylation sites on V1/V2 have an inverse significant correlation with IC₅₀ of 4E10, *p* value 0.012 and 0.029, respectively. In contrast, no correlation was found in IC₅₀ of 2F5 and IgG1 b12. However, T/F viruses were moderately susceptible to IgG1 b12 which is potentially a CD4 binding site which induces the high levels of neutralization susceptibility. Early Env clones show varying neutralization susceptibility to specific viral entry whereas the length of V1/V2 amino acids is negatively significant correlation with TAK-779 susceptibility of the recombinant viruses, *p* value 0.048. Most recombinant viruses were susceptible to neutralization by NHMAbs to Env gp41, whereas approximately one-third of the recombinant viruses were susceptible to a NHMAb against the CD4 binding site of gp120.

Conclusion: This study is the first report on the subtype CRF01_AE T/F Env-recombinant viruses that provide a valuable tool for further study on immunological and antigenic characterizations.

Keywords: ● Neutralizing antibody ● NHMAb ● Env-recombinant virus

Abstract no. 54

The Optimal Immunohistochemical Staining Conditions for An Expression of *Engrailed 1 (En1)* Gene in The Formalin-Fixed, Paraffin-Embedded Tissue of Invasive (Infiltrating) Breast Carcinoma

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Background: *Engrailed 1 (EN1)* gene has been reported to show gain in a human basal-like breast carcinoma cell line. An immunohistochemical technique can demonstrate the presence and location of EN1 protein in the formalin-fixed, paraffin-embedded tissue section of invasive (infiltrating) breast carcinoma (FFPE-TS-IBC). However, the immunostaining optimisation must be performed initially.

Objective: The objective of this study was to find the most appropriate staining conditions based on the use of a domestic 750-watt microwave oven with sodium citrate buffer solution (SCBS).

Methodology: The deparaffinized and rehydrated FFPE-TS-IBCs were treated in 1 x 10 mM SCBS of pH 6.0 with a microwave antigen retrieval (MAR) at 650, 700, and 750 watts for 5, 10, 15, and 20 minutes. Mouse and Rabbit Specific Horseradish Peroxidase (HRP)/3,3'-Diaminobenzidine (DAB) [Avidin-Biotin Complex (ABC)] Detection Immunohistochemistry (IHC) Kit[®] with the anti-human EN1 mouse monoclonal primary antibody (1[°] Ab) (ab119111[®]) dilutions of 1:50, 1:100, 1:200, and 1:500 were used for determining EN1 protein expression in each individual slide. The normal mammary epithelial cells (NMECs) and malignant cells (MCs) were independently evaluated the nuclear staining intensity (i) [0 (none), 1 (weak), 2 (moderate), and 3 (strong)] and a percentage of stained cells at each intensity level (Pi). The histochemical scoring (H-score) was (0 x P0) + (1 x P1) + (2 x P2) + (3 x P3). The optimal conditions for immunoexpression were considered according to the H-score and the nuclear staining quality.

Results: An immunohistochemical expression of *EN1* gene in NMECs and MCs yielded the H-score range from 0 to 300. Both cells revealed obviously nuclear staining (H-scores of 300 and 140, respectively) by microwaving at 700 watts for 10 minutes and using a 1:50 dilution of 1[°] Ab.

Conclusion: Based on a MAR with SCBS, an expression of EN1 protein is distinctly detectable in the FFPE-TS-IBC by heating at 700 watts for 10 minutes and using a 1[°] Ab dilution of 1:50.

Keywords: ● Immunohistochemical optimisation ● *Engrailed 1* gene ● Breast carcinoma

Abstract no. 55

Efficacy of Preoperative Posterior Subtenon Injection of Triamcinolone Acetate To Control Postoperative Cataract Surgery Inflammation in Non-infectious Uveitis Patients

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Objective: To evaluate the efficacy of a single preoperative posterior sub-Tenon's capsule triamcinolone acetonide injection in treatment ocular inflammation after cataract surgery.

Design: Retrospective descriptive study.

Methods: Monocentre, retrospective study in 31 eyes (24 patients) with non-infectious uveitis receiving a single posterior subtenon's capsule triamcinolone acetonide (40mg) injection before underwent phacoemulsification with IOL implantation. Outcome measures were anterior chamber cell, IOP (intraocular pressure, Goldman applanation), best-corrected visual acuity (BCVA), and CME (cystoid macular edema) over a 3-month follow-up period.

Results: Thirty eyes of 23 patients completed 3 months after cataract surgery were included in the study. The number of patients with active inflammation ($\geq 1+$ cells in the AC) was found up to 63.3% in postoperative day 7 and significantly decrease over the follow-up period ($p = 0.002$ at day 30 and $p < 0.001$ at day 90). Ocular inflammation was controlled in 90% of patient at the end of follow-up period. Mean BCVA compared to baseline improved significantly in each visit ($p < 0.001$). The difference of IOP between baseline and each visit were not significant. Macular edema was observed in 10%.

Conclusion: A single preoperative 40 mg triamcinolone acetonide posterior subtenon's capsule injection for phacoemulsification was effective and safe. A posterior subtenon's capsule TA injection appears to be an alternative approach for preoperative medication or adjunct to the conventional management in non-infectious uveitis patients.

Abstract no. 56

Demographic Study of Human Immune Deficiency Virus (HIV) Incidence among Young Thai Men from 2005-2012

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Background: One important measure of HIV rates in the general Thai population comes from the Royal Thai Army (RTA), where all new male recruits are tested for HIV infection. The estimated HIV-1 incidence among RTA conscripts using IgG capture BED-enzyme immunoassays was assessed in 2005. Demographic study of recent HIV infection among young generation in Thailand is crucial for improving the intervention and prevention programs.

Method: Approximately 60,000 men are recruited into the Army each year, providing a unique random sample of mostly 21 year old men throughout the country. Each year, the conscripts are selected by lottery yearly throughout Thailand. All enlistees are routinely screened for HIV-1 by enzyme-linked immunosorbent assay with Western Blot confirmation. The HIV-1 seropositive subjects were tested by the Calypte[®] HIV BED-EIA as recent seroconversion. We evaluated estimated HIV-1 incidence from 2005-2012. The young Thai men who gave informed consent to screen with HIV-1 had to answer the questionnaire of demographic study.

Results: The prevalence of HIV-1 infection from 2005-2012 was consistent at 0.5%. The estimation of HIV-1 incidence from 2005-2009 increased and reached 0.39% per year (95%CI: 0.31-0.47) in 2009. We found the differences for HIV incidence by age, status, education and region. Most of early HIV infection was 21 years old. The single status had an effect on incidence case. Conscripts who had a lower education level or lived in central region were found to have more recent infections.

Conclusions: Our results suggest that the education and region factors are important for HIV-1 incidence among young Thai men. Thus, the high education and good intervention may reduce the incidence case.

Abstract no. 57**Production of *Leptospira* LipL32 Specific-monoclonal Antibodies Conjugated to Dextran-coated Iron Oxide Magnetic Nanoparticles**

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Background: Leptospirosis is an emerging infectious disease caused by infection with pathogenic bacteria in genus *Leptospira*. It is difficult to diagnose of leptospirosis because of the symptoms are similar to other febrile illnesses. Early and accurate laboratory testing is crucial for a proper differential diagnosis of this disease. Thus, immuno-magnetic diagnosis approaches for capturing leptospires is a new method with improved sensitivity and easily operated would be beneficial for diagnosis of leptospirosis.

Objective: To produce anti-LipL32-dextran-coated-iron oxide magnetic nanoparticles using two monoclonal antibodies (mAbLPF1 and mAbLPF2) specific to surface exposed epitope peptides of *Leptospira*, LipL32.

Methodology: Dextran-coated iron oxide magnetic nanoparticles were synthesized by co-precipitation method and exhibited ferromagnetic property. LipL32 protein was produced from a transformed BL21(DE3) *Escherichia coli* containing *lipl32*-pET23a plasmid and was purified by using immobilized metal affinity column. Two hybridoma secreting monoclonal antibodies (MAbs), mAbLPF1 and mAbLPF2 specific to surface exposed epitope peptides of *Leptospira* LipL32 were coupled with the particles. The amount of LipL32 that can entrap onto the particles was determined by ELISA method.

Results: Percent entrapment of mAbLPF1 and mAbLPF2 to the particles were 16 and 36%, respectively, when compared to BSA control (29.6%). Immunomagnetic separation of recombinant LipL32 protein was performed and the capture efficiency of mAbLPF1-MNP and mAbLPF2-MNP were 60.07% and 34.10%, respectively.

Conclusions: In summary, we have successfully synthesized anti-LipL32-dextran-iron oxide magnetic nanoparticles with ferromagnetic, and LipL32-captured properties. The nanoparticle will be more characterized and developed as a material for capturing and separating LipL32 antigen from lysed leptospires as well as live spirochete from clinical specimens in order to improve the diagnostic sensitivity.

Keywords: ● *Leptospirosis* ● *Dextran-coated iron magnetic nanoparticles*
● *LipL32 specific-monoclonal antibody*

Abstract no. 58

Comparison of Corneal Endothelial Cell Changes in the Eyes of Primary Angle-Closure Suspects (PACS) Treated by Laser Peripheral Iridotomy (LPI) and in Untreated Fellow Eyes, Phramongkutklao Hospital

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Objective: To compare corneal endothelial cell changes in the eyes of Primary Angle-Closure Suspects (PACS) treated by laser peripheral iridotomy (LPI) and in untreated fellow eyes. The secondary outcome was to assess short-term effects of LPI on corneal endothelium in PACS subjects.

Methodology: Prospective study. PACS subjects visiting Phramongkutklao Hospital were enrolled in the present study. Data collection was included as types and power of LPI, endothelial cell counts and morphology, gonioscopy, and underlying diseases. The randomized eye was treated by LPI and the other eye was treated by LPI 3 months later. Rate of corneal endothelium loss in treated eye was assessed and compared with untreated fellow eyes. Primary outcome was interpreted by Pair t-test. Secondary outcome was interpreted by ANOVA test.

Results: The 31 subjects (62 eyes) with PACS were included in the study. The median age was 67 years (range 43-90). Subjects with PACS were 21 females (67.7%) and 10 males (32.3%). The mean total power of argon and Nd:YAG lasers respectively were 855.6 ± 53.9 mW and 2.3 ± 0.5 mJ. In primary outcome, the mean corneal endothelial cell density before LPI and Post LPI 3 month were 2608.5 ± 399.8 , 2605.6 ± 397.1 cell/mm². In untreated fellow eyes, the mean corneal endothelial cell density at 1, 3 month were 2607.1 ± 419.6 , 2605.0 ± 403.2 cell/mm². There was not statistically significance in rate of endothelial cell change between treated and untreated fellow eyes by LPI ($p = 0.981$). In secondary outcome, corneal endothelial cell density was not decreased statistically significant in 3 months ($p = 0.126$).

Conclusion: There is no difference in corneal endothelial cell changes between treated and untreated fellow eyes by LPI in 3 months. LPI has not effected corneal endothelial cell loss in short term period.

Abstract no. 59

Prevalence of Hepatitis B Virus Infection and Protective Immunity among Royal Thai Army Personnel Attending a Medium Level Administrative Course in 2015

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Background: Hepatitis B virus (HBV) infection is a major communicable disease of Thailand because the prevalence is rather high of more than 4% in general. It is also easily acquired and make severe complications, i.e., chronic hepatitis, liver cirrhosis, hepatocellular carcinoma and death.

Objective: To study the prevalence of hepatitis B infection and protective immunity of the Royal Thai Army (RTA) persons attending a medium level administrative course. The one who is HBV- infected will be recommended to meet the hepatologist to receive appropriate treatment and the one who has not enough protective immunity for HBV will be recommended to receive hepatitis B vaccination.

Methods: Persons attending a medium level administrative course were tested for hepatitis B surface antigen (HBsAg) and anti-HBs by electro-chemiluminescence immunoassay. The anti-HBs more than 10 IU/L is considered as positive for HBV protection or immune persons. Then, the prevalence of HBV infection and protective immunity for HBV were calculated

Results: Two hundred eighty three persons were tested. All of them are men aged 31-41 with the average of 33.62 years. Five persons are positive for HBsAg and 194 persons has protective antibody for HBV. This made the prevalence of HBV of 1.77% and the protective immunity of 68.55% respectively.

Conclusions: The prevalence of HBV infection in general population tends to decrease after hepatitis B vaccination has included in the expanded program on immunization (EPI) of Thailand since 1992. Moreover, there are effective chemotherapy for HBV infection and the government support the cost expenditure. However, there should be continuous surveillance program for this kind of infection with cooperative effort to control and eradicate it from Thailand in the future.

Keywords: ● Prevalence ● Hepatitis B virus infection ● Immunity ● Personnel

บทคัดย่อที่ 60

สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหารได้รับรางวัลบริการภาครัฐแห่งชาติ ประจำปี 2558 เป็นครั้งแรก : การตรวจและรักษามาลาเรียแบบเบ็ดเสร็จ

ประดิษฐ์ แก้วเสถียร คุณากร คณา ตูลย์ เรืองอารีรัชต์ ขวัญอนงค์ ยังพะกุล

นฤพน คุดตะสิงห์ดี ไชยยะ จันทรชู อัคราวุฒิ บุญเชียงมา พจมาน วัชรภิชิต สุธิตรา สุขวัญทิพย์วรรณ ชื่นจิตร ดุษฎี ทัดตานนท์ ประสงค์ ล้อมทอง และ สายัณห์ สวัสดิ์ศรี

สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร

ความสำคัญ โรคมาลาเรียเป็นโรคที่มีความรุนแรง และเป็นอุปสรรคปัญหาที่สำคัญของทหารที่ต้องปฏิบัติภารกิจป้องกันชายแดน ซึ่งเป็นพื้นที่เสี่ยงและมีอัตราการแพร่ระบาดของเชื้อมาลาเรียสูง ถ้าได้รับการรักษาล่าช้า จะเสี่ยงต่อการเกิดภาวะแทรกซ้อน ทำให้เสียชีวิตได้ แผนกระบวนวิชา กองวิจัย สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร (สวพท.) กรมแพทย์ทหารบก ได้เห็นความสำคัญของปัญหา เพื่อเป็นการ ป้องกันความสูญเสียกำลังพล และเพิ่มขีดความสามารถให้กับกำลังพลของกองทัพบกที่ปฏิบัติหน้าที่ตามแนวชายแดนและตอบสนองต่อภารกิจ จึงได้จัดทำชุดตรวจและรักษามาลาเรียเบ็ดเสร็จเพื่อแจกจ่ายให้แก่กำลังพลทหารที่ปฏิบัติหน้าที่บริเวณชายแดน ที่ได้รับการอบรมการตรวจและรักษามาลาเรีย ให้สามารถตรวจและรักษามาลาเรียด้วยตนเองในเบื้องต้นได้อย่างรวดเร็ว ไม่ต้องส่งกลับกำลังพลที่อาการป่วยมารับการตรวจรักษาใน ส่วนหลัง โดยเฉพาะพื้นที่ทุรกันดาร ต้องใช้เวลาในการเดินทางหลายวันทำให้การรักษาล่าช้า ดังนั้น สวพท. จึงได้พิจารณา จัดส่งงานบริการที่ให้กับทหารตามแนวชายแดนนี้เข้าประกวด เพื่อขอรับรางวัลบริการภาครัฐ ประจำปี พ.ศ. 2558 ประเภทการพัฒนาการบริการที่เป็นเลิศ ที่สำนักงานคณะกรรมการพัฒนาระบบราชการ (กพร.)

วัตถุประสงค์ เพื่อเพิ่มศักยภาพ และขีดความสามารถในการตรวจและรักษามาลาเรียในเบื้องต้นให้กับ ทหารเสนารักษ์ ทหารราบ ทหารพราน ดำรงจระเขยชายแดน ที่ปฏิบัติภารกิจตามแนวชายแดน ลดขั้นตอนในการส่งกลับ ป้องกันการสูญเสียกำลังพล เพื่อสร้างขวัญกำลังใจต่อกำลังพลที่ปฏิบัติภารกิจ สนองตอบความต้องการนโยบายของ กรมแพทย์ทหารบก และกองทัพบกในการอนุรักษ์กำลังรบ

วิธีการ วิเคราะห์ สภาพปัญหา วิธีการดูแล ความเสี่ยงต่อการสูญเสียของกำลังพล ที่เจ็บป่วยด้วยโรคมาลาเรีย ทบทวนเทคนิค วิธีการตรวจหาเชื้อมาลาเรีย และวิธีการรักษา จัดทำแผนการฝึกอบรม ระยะเวลาที่ใช้การอบรม และขั้นตอนการฝึกอบรม และการแจกจ่ายชุดตรวจและรักษามาลาเรียเบ็ดเสร็จ และการติดตามประเมินผลการฝึกอบรมการนำไปใช้

ผลการดำเนินงาน 1) ได้ทำการฝึกอบรมกำลังพลทหาร โดยการเรียนรู้และวิธีการตรวจรักษามาลาเรีย จำนวน 91 นาย ทั้งภาคทฤษฎี และภาคปฏิบัติ มีความรู้ เรื่องโรคมาลาเรีย ร้อยละ 98.8 และสามารถปฏิบัติในการตรวจและรักษา บันทึกรายงานผลได้ถูกต้อง ร้อยละ 100 2) การติดตามและประเมินผลการใช้ “ชุดตรวจและรักษามาลาเรียเบ็ดเสร็จ” ซึ่งได้แจกจ่ายไปรวมจำนวน 300 ชุด ในพื้นที่รับผิดชอบ มีกำลังพลที่มีอาการป่วยมารับการตรวจและรักษา รวม จำนวน 260 ราย พบกำลังพลติดเชื้อมาลาเรียและให้การรักษาจำนวน 65 นาย ไม่มีการสูญเสียกำลังพลจากการเจ็บป่วย 3) ผลการประเมินความพึงพอใจและข้อเสนอแนะของผู้ให้การรักษา และกำลังพลป่วยที่เข้ารับการตรวจรักษา รวมถึงผู้บังคับบัญชาของหน่วยทหารในพื้นที่ ทุก 1-2 เดือน โดยระดับผู้บังคับบัญชา จำนวน 67 นาย พบว่า ร้อยละ 95.5 มีความพึงพอใจและว่ามีความสะดวก

ง่ายต่อการปฏิบัติ ลดขั้นตอนการส่งกลับ สามารถป้องกันการสูญเสียของกำลังพล สำหรับกลุ่มผู้ให้การตรวจรักษา จำนวน 83 นาย พบว่า ร้อยละ 78 มีความพึงพอใจอยู่ในระดับดีถึง ดีมากในด้านอุปกรณ์ คุณภาพและจำนวน และร้อยละ 94 มีความพึงพอใจอยู่ในระดับดีถึงดีมากในด้านผลการตรวจรักษา และกลุ่มกำลังพลที่มีอาการป่วยและเข้ารับการตรวจรักษา จำนวน 65 นาย พบว่า ร้อยละ 100 มีความพึงพอใจอยู่ในระดับดีมากต่อการตรวจและรักษา

สรุป การตรวจและรักษามาลาเรียเบ็ดเสร็จให้กับทหารกล้าชายแดนนี้ เป็นผลงานที่ได้รับรางวัลการพัฒนาบริการที่เป็นเลิศ จาก กพร. ประจำปี พ.ศ.2558 ในระดับดี อย่างไรก็ตาม สวพท.จะปรับปรุงและพัฒนาการดำเนินการให้บริการที่มีประโยชน์ต่อทหารกล้าชายแดนต่อไป โดยมีการเพิ่มเติมอุปกรณ์พร้อม “ชุดการตรวจและรักษามาลาเรียแบบเบ็ดเสร็จ” ให้มีปริมาณเพียงพออย่างต่อเนื่องและมีการเพิ่มการแจกจ่ายไปยังกองกำลังอื่นๆ ที่อยู่ตามแนวชายแดน ของกองทัพบก

Keywords: ● มาลาเรีย ● ชุดตรวจมาลาเรีย ● ยารักษามาลาเรีย ● รางวัลบริการภาครัฐแห่งชาติ
● สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร

บทคัดย่อที่ 61

การเฝ้าระวังโรคมาลาเรียเชิงรุกในพื้นที่ปฏิบัติการทางทหารบริเวณชายแดนไทย - เมียนมาร์ และชายแดนไทย - กัมพูชา ปีงบประมาณ 2558

นฤพน คุณตะสิงค์ ขวัญอนงค์ ยังพะกุล ไชยยะ จันทรชู อัคราวุฒิ บุญเชียงมา สุธิตรา สุขวิทย์

ทิพย์วรรณ ชื่นจิตร และ คุณากร คณา

กองวิจัย สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร

หลักการและเหตุผล ไข้มาลาเรียเป็นปัญหาทางด้านสาธารณสุขที่สำคัญของประเทศไทย และยังคงเป็นปัญหาลำคัญในทหาร ตำรวจตระเวนชายแดน และทหารพราน ที่ปฏิบัติการกิจบริเวณแนวชายแดน ทั้งด้านชายแดนไทย-เมียนมาร์ และไทย-กัมพูชา กำลังพลที่ปฏิบัติการกิจตามแนวชายแดนมักจะต้องเข้าไปในพื้นที่เสี่ยงต่อโรคมาลาเรียตลอดเวลา จึงทำให้มีโอกาสติดเชื้อมาลาเรียสูง

วัตถุประสงค์ เพื่อติดตามสถานการณ์การเจ็บป่วยด้วยโรคมาลาเรียเชิงรุก ควบคุมการระบาดของโรคมาลาเรียในกำลังพลที่ปฏิบัติการกิจในพื้นที่ระบาดของโรคตามแนวชายแดนไทย-เมียนมาร์ เขตจังหวัดตาก และชายแดนไทย-กัมพูชา เขตจังหวัดสุรินทร์ จังหวัดศรีสะเกษ และจังหวัดอุบลราชธานี เพื่อสร้างขวัญและกำลังใจกับกำลังพลที่ปฏิบัติงานในพื้นที่ห่างไกลและทุรกันดาร

วิธีการศึกษา ดำเนินการค้นหากำลังพลที่ป่วยด้วยโรคมาลาเรียเชิงรุก (active surveillance) ทำการประเมินการติดเชื้อมาลาเรีย ทุก 3 - 4 เดือน โดยการเจาะเลือดปลายนิ้วตรวจหาเชื้อมาลาเรียในฟิล์มเลือดแบบหนาที่ย้อมด้วยสี Giemsa ผ่านทางกล้องจุลทรรศน์ (WHO standard microscopic method) เมื่อตรวจพบเชื้อทำการรักษาโดยทันทีเป็นการตัดวงจรของโรค เพื่อควบคุมการระบาดของโรคมาลาเรีย

ผลการศึกษา ด้านชายแดนไทย-เมียนมาร์ ในพื้นที่จังหวัดตาก ยอดเจาะเลือดตรวจทั้งหมด 1,293 ราย อัตราการติดเชื้อมาลาเรียของกำลังพล ร้อยละ 0 (พลเรือนมีอัตราการติดเชื้อมาลาเรีย ร้อยละ 0.49) ด้านแนวชายแดนไทย-กัมพูชา ในพื้นที่จังหวัดสุรินทร์ จังหวัดศรีสะเกษ และจังหวัดอุบลราชธานี ดำเนินการเจาะเลือดตรวจหาเชื้อทั้งหมด 6,851 ราย พบผู้ติดเชื้อ 21 ราย แยกเป็น *P. falciparum* 6 ราย *P. vivax* 14 ราย และ Mix 1 ราย คิดเป็นอัตราการติดเชื้อ ร้อยละ 0.31 (พลเรือนมีอัตราการติดเชื้อมาลาเรีย ร้อยละ 0.64) โดยห้วงเดือนพฤศจิกายน 2557 ดำเนินการเจาะเลือด 1,033 ราย ตรวจพบเชื้อมาลาเรีย 3 ราย คิดเป็นอัตราการติดเชื้อ ร้อยละ 0.29 แยกชนิดเชื้อเป็น *P. falciparum* 1 ราย *P. vivax* PV 2 ราย ห้วงเดือนมกราคม 2558 ดำเนินการเจาะเลือด 978 ราย ตรวจพบเชื้อมาลาเรีย 2 ราย คิดเป็นอัตราการติดเชื้อ ร้อยละ 0.20 แยกชนิดเชื้อเป็น *P. falciparum* 1 ราย *P. vivax* 1 ราย ห้วงเดือนมีนาคม 2558 ดำเนินการเจาะเลือด 1,243 ราย ตรวจพบเชื้อมาลาเรีย 5 ราย คิดเป็นอัตราการติดเชื้อ ร้อยละ 0.40 แยกชนิดเชื้อเป็น *P. falciparum* 1 ราย *P. vivax* 4 ราย ห้วงเดือนมิถุนายน 2558 ดำเนินการเจาะเลือด 1,907 ราย ตรวจพบเชื้อมาลาเรีย 7 ราย คิดเป็นอัตราการติดเชื้อ ร้อยละ 0.37 แยกชนิดเชื้อเป็น *P. falciparum* 3 ราย *P. vivax* 3 ราย และ Mix 1 ราย ห้วงเดือนสิงหาคม 2558 ดำเนินการเจาะเลือด 1,690 ราย ตรวจพบเชื้อมาลาเรีย 4 ราย คิดเป็นอัตราการติดเชื้อ ร้อยละ 0.24 แยกชนิดเชื้อเป็น *P. vivax* 4 ราย

สรุป โรคมาลาเรียในพื้นที่ชายแดนไทย-กัมพูชา ยังคงเป็นปัญหากับการปฏิบัติการทางทหาร การเฝ้าระวังโรคมาลาเรียเชิงรุก ในปีงบประมาณ 2558 ยังพบผู้ติดเชื้อมาลาเรีย ซึ่งส่วนใหญ่เป็นชนิด *P. vivax* ส่วนแนวชายแดนไทย-เมียนมาร์ ไม่พบผู้ติดเชื้อมาลาเรีย อย่างไรก็ตามการเฝ้าระวังโรคมาลาเรียเชิงรุกในพื้นที่ปฏิบัติการทางทหารบริเวณชายแดนยังต้องดำเนินการต่อไป เพื่อลดการระบาดของโรคและป้องกันการสูญเสียกำลังรบ อันจะนำมาซึ่งความมั่นคงของชาติ

Keywords: ● มาลาเรียเชิงรุก ● ทหาร ● ชายแดนไทย-เมียนมาร์ ● ชายแดนไทย - กัมพูชา

บทคัดย่อที่ 62

งานเฝ้าตรวจคุณภาพน้ำในในพื้นที่กองทัพบกที่ 3

สมรรถ ปรีกลาง อรรถสิทธิ์ ประดิษฐ์พรกุล มนัสวี ทองศฤงคลี วีระ ทองพุ่ม
สรณคมน์ ทองยัง วีระศักดิ์ แสงอรุณ พรพรรณ เนืองชมภู ดวงพร พูลสุขสมบัติ
ชัยพฤกษ์ ปิลกศิริ และ ปราณีฉาย เศรษฐจันทร์

กองวิเคราะห์ สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร

บทนำ งานเฝ้าตรวจคุณภาพน้ำในที่ตั้งหน่วยทหาร เป็นงานเวชศาสตร์เชิงรุก ซึ่งมีวัตถุประสงค์เพื่อการสร้างเสริมคุณภาพชีวิตให้แก่กำลังพลทหารให้มีความสะอาดในการอุปโภคและบริโภค นอกจากนี้ยังมุ่งหวังให้โรงพยาบาลกองทัพบกใส่ใจในสิ่งแวดล้อม ไม่ปล่อยน้ำเสีย-น้ำทิ้งที่ไม่ได้ผ่านการบำบัด หรือผ่านการบำบัดแล้วมีคุณภาพไม่ดีพอ ออกไปทำลายสิ่งแวดล้อม และอาจเป็นแหล่งก่อโรคระบาดอีกด้วย

วัตถุประสงค์ เพื่อศึกษาคุณภาพน้ำอุปโภค-บริโภคของหน่วยทหาร ในพื้นที่กองทัพบกที่ 3

การดำเนินงาน ตรวจวิเคราะห์คุณภาพน้ำ จำนวนตัวอย่างทั้งสิ้น 208 ตัวอย่าง จาก 80 หน่วย โดยนำผลการวิเคราะห์ไปเปรียบเทียบกับค่ามาตรฐาน ของสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม กระทรวงอุตสาหกรรม (มอก.257) มาตรฐานคุณภาพน้ำในแหล่งน้ำผิวดินตามประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 8 (พ.ศ.2538) และ มาตรฐานควบคุมการระบายน้ำทิ้งจากอาคารประเภท ก. ตามประกาศกระทรวงทรัพยากรธรรมชาติและสิ่งแวดล้อม เรื่อง กำหนดมาตรฐานควบคุมการระบายน้ำทิ้ง จากอาคารบางประเภทและบางขนาด ตามประกาศในราชกิจจานุเบกษา เล่ม 22 ตอน 125 ง หน้า 4 วันที่ 29 ธันวาคม 2548

ผลการดำเนินงาน ผลการตรวจวิเคราะห์พบว่าคุณภาพของน้ำอุปโภค-บริโภคอยู่ในเกณฑ์มาตรฐาน 138 ตัวอย่าง (ร้อยละ 73.8) ไม่อยู่ในเกณฑ์มาตรฐาน 49 ตัวอย่าง (ร้อยละ 26.2) สำหรับน้ำเสีย-น้ำทิ้งหลังผ่านระบบบำบัดน้ำเสียอยู่ในเกณฑ์มาตรฐาน 8 ตัวอย่าง (ร้อยละ 30.1) ไม่อยู่ในเกณฑ์มาตรฐาน 13 ตัวอย่าง (ร้อยละ 61.9)

สรุป ข้อมูลการตรวจคุณภาพน้ำอุปโภค-บริโภคเป็นข้อมูลสำคัญสำหรับผู้บังคับบัญชาหน่วยทหาร เพื่อใช้ประกอบการวางแผนแก้ไข และปรับปรุงแหล่งน้ำภายในหน่วยให้ได้มาตรฐานสำหรับการอุปโภค-บริโภค และเป็นการส่งเสริมสุขภาพกำลังพลทหารทุกคนให้ปราศจากโรคที่เกิดจากมีสารปนเปื้อนและจุลินทรีย์ในน้ำ โดยใช้เป็นข้อมูลส่วนหนึ่งในการวางแผนในโครงการพัฒนาคุณภาพชีวิตทหารต่อไป

Keywords: ● ตรวจคุณภาพน้ำ ● กองทัพบกที่ 3

Abstract no. 63

Efficacy of Potassium Chloride Plus Normal Saline Compare to Potassium Chloride Plus Half Strength Normal Saline for Correction of Hypokalemia in Hospitalized Patients

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Background: Hypokalemia is frequently encountered in hospitalized patients. Intravenous (IV) potassium repletion with saline is preferred used for initial therapy. However, in experiment study, administration of normal saline (0.9%NaCl) usually provokes sodium and potassium diuresis, thus, it might delay reversal of the hypokalemia.

Objective: To evaluate efficacy and safety of IV administration of potassium chloride (KCl) plus 0.9%NaCl compare with KCl plus half-strength normal saline solution (0.45%NaCl) in correcting hypokalemia.

Methods: In a randomized, controlled trial, 58 hospitalized patients with serum potassium between 2.50 and 3.49 mEq/L were assigned to receive either IV KCl 60 mEq plus 0.9%NaCl 1,000 mL or IV KCl 60 mEq plus 0.45%NaCl 1,000 mL at 80 mL/hour to achieve normal serum potassium. Serum and urine potassium levels were monitored at 6, 12, and 24 hours after treatment.

Results: Compared to those assigned to 0.45%NaCl regimen, patients assigned to 0.9%NaCl regimen were significantly increased serum potassium at 6 hour (0.9%NaCl; 3.90 ± 0.3 and 0.45%NaCl; 3.64 ± 0.3 , $p = 0.036$). However, there were no differences in serum potassium levels between both groups after 12 hours and 24 hours of treatments. (0.9%NaCl; 3.90 ± 0.3 and 0.45%NaCl; 3.70 ± 0.2 , $p = 0.403$). Urinary potassium and sodium loss did not change in either group throughout the study. Adverse effects including burning sensation and hyponatremia were not different in both groups.

Conclusion: This study indicates that the administration of IV KCl plus 0.9%NaCl regimen in hospitalized patients is more rapidly correction of hypokalemia, but there is similar efficacy of treatment with both saline regimens at 24 hours.

Keywords: ● Hypokalemia ● Potassium chloride ● Normal saline ● Half-strength normal saline

บทคัดย่อที่ 64

ข้อมูลอัตราการใช้สารเสพติดในชายไทยที่ผ่านการตรวจเลือกเข้าเป็นทหารกองประจำการ กองทัพบก ประจำปี 2557

วรรณกมล ทองนวล ดรุณี อุเทนนาม จิรวรรณ เมืองโคมพัส หวิษ พงษ์การณ

พรเกษม รักษาเคน ชัยพฤกษ์ ปิลกศิริ และ ปรางฉาย เศรษฐจันทร์

กองวิเคราะห์ สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร

บทนำ กรมแพทย์ทหารบกได้มอบหมาย สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหารให้เป็นหน่วยหลักในการวิเคราะห์ วิจัยเกี่ยวกับสารเสพติดให้โทษทุกประเภท จึงได้ดำเนินการตรวจสอบหาสารเสพติดในปัสสาวะของทหารกองประจำการ สังกัดหน่วยส่วนกลางและหน่วยในพื้นที่กองทัพบกที่ 1 ตั้งแต่ปี พ.ศ. 2531 เพื่อเฝ้าระวังมิให้มีการแพร่ระบาดของสารเสพติดให้โทษร้ายแรงเข้ามาในหน่วยทหาร

วัตถุประสงค์ เพื่อสำรวจอัตราการใช้นิโคตินของสารเสพติดในชายไทยที่ผ่านการตรวจเลือกเข้าเป็นทหารกองประจำการ กองทัพบก ประจำปี 2557

การดำเนินงาน นำตัวอย่างปัสสาวะของทหารกองประจำการ ผลัดที่ 1/57 และผลัดที่ 2/57 ที่ถูกเก็บมาจากหน่วยทหารส่งตรวจทางห้องปฏิบัติการ เพื่อตรวจหาชนิดของสารเสพติดโดยการตรวจคัดกรอง (screening test) ด้วยวิธี Immuno-chromatography ปัสสาวะที่ให้ผลบวกจะได้รับการตรวจยืนยันด้วยวิธี Gas chromatograph/Mass spectrometry (GC/MS)

ผลการดำเนินงาน ตรวจปัสสาวะหาสารเสพติดในทหารกองประจำการผลัดที่ 1/57 จาก 15 หน่วย จำนวน 1,504 นาย ตรวจพบสารเสพติดชนิดเมทแอมเฟตามีน 128 นาย คิดเป็นร้อยละ 8.51 กัญชา 52 นาย คิดเป็นร้อยละ 3.46 และทหารกองประจำการผลัดที่ 2/57 จาก 15 หน่วย จำนวน 1,520 นาย ตรวจพบสารเสพติดชนิดเมทแอมเฟตามีน 113 นาย คิดเป็นร้อยละ 7.43 กัญชา 59 นาย คิดเป็นร้อยละ 3.88 ผีนและอนุพันธ์ของผีนตรวจไม่พบทั้ง 2 ผลัด สารเสพติดชนิดเมทแอมเฟตามีนและกัญชาที่ถูกตรวจพบในทหารกองประจำการผลัดที่ 1/57 มีแนวโน้มที่สูงกว่า ผลัดที่ 2/57

สรุป ข้อมูลที่ได้จากการสำรวจการใช้นิโคตินของสารเสพติดของทหารประจำการในแต่ละผลัด เป็นข้อมูลที่ช่วยให้ผู้บังคับหน่วยทหารและผู้ที่เกี่ยวข้องทราบ เพื่อนำไปใช้เป็นแนวทางในการวางแผนการปฏิบัติการป้องกัน แก้ไข และปราบปรามยาเสพติดให้โทษภายในกองทัพบก

Keywords: ● ยาเสพติด ● ทหารกองประจำการ ● กองทัพบก

Abstract no. 65

Relation between Readiness of Reading and Pattern of Reading and Understanding of Nursing Student Class 51 of The Royal Thai Army Nursing College

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The Royal Thai Army Nursing College

Introduction: The nursing student class 51 of The Royal Thai Army Nursing College began to study nursing. So there are many factors that affect the understanding such as the adaptive learning, military discipline, activities with clear deadlines including health status and availability of reading. Reading is a necessary skill for studying, researching, reviewing, understanding and also relaxing. In addition, reading is a basic skill that is required in every level of education. From the exam results in 2014 found that mostly nursing students have GPAX in the 2.51-3.00 which from some query show the problem is nursing student can't conclude the main idea. Therefore, the researchers are interested in doing the research on the relation between readiness of reading and pattern of reading and understanding of nursing student class 51 of The Royal Thai Army Nursing College to find the way that helps readers read more understandably.

Objective: To study the relationship between readiness of reading, pattern of reading and understanding of nursing student class 51 of the Royal Thai Army Nursing College.

Study Design: Correlation descriptive research

Material and Method: The sample were selected by simple random sampling from a amount of 69 persons. There are 3 measuring tools: comprehension check form, reading readiness check and opening questions about students' readiness and style of reading that are used to measure nursing students class 51 of the Royal Thai Army Nursing College. The data were analyzed by mean, percentage, standard deviation and Pearson's correlation.

Result: 1) Readiness of reading of nursing students class 51 of The Royal Thai Army Nursing College was in a high level score ($\bar{X} = 3.97$, S.D. = 0.34) considering to above it was found that readiness of physique was in a high level score ($\bar{X} = 4.20$, S.D. = 0.39) readiness of mind was in a high level score ($\bar{X} = 4.08$, S.D. = 0.42) readiness of time was high level ($\bar{X} = 3.50$, S.D. = 0.62) readiness of material/environment was in a high level score ($\bar{X} = 4.02$, S.D. = 0.44) 2) Pattern of reading of the sample group was in a medium level score ($\bar{X} = 3.31$, S.D. = 0.42). 3) Understanding of reading of the sample group was low level : 46.6%. The

relationship between readiness of reading, pattern of reading and understanding of the sample group was a statistically insignificantly relationship at .05 level of statistical significance.

Conclusion: Reading comprehension relates to cognitive domain, caused by the brain function that mainly affects one's reading comprehension; as a result, only the readiness of reading and pattern of reading might not enough for improving the understanding in reading that have to study in the relating factors next time.

Keywords: ● *Reading* ● *Readiness of reading* ● *Pattern of reading* ● *Understanding*

Abstract no. 66

The study of Stressful and Realizable in Military Training Discipline and The Rule and Custom of The Freshman of The Royal Thai Army Nursing College, Bangkok, Thailand

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Background: The Royal Thai Army Nursing College is an educational institution that mainly focuses on learning. In addition, the institution also develops academic research, culture preservation, as well as environmental protection under the effective quality assurance system. Therefore, students who want to study in the college have to prepare themselves in terms of physical and mental ability in order to receive military training and improve their discipline. Due to the difference between civilian state and military state, this may cause stress to student, especially, the first year student. However, student will need to learn to adjust themselves, using their patience and discipline, in order to be prepared for the mannerism from the Royal Thai Army Nursing College.

Objective: The purposes of this study were, firstly, to examine stress and the stress level of 1st year nursing students in the first month in accordance with the rules and observance of the Royal Thai Army Nursing College. Secondly, study the perception of 1st year nursing students with regard to seniority system. Finally, gather opinions from 1st year nursing students regarding seniority and observance of the Royal Thai Army Nursing College.

Design: Qualitative research

Materials and Methods: Sixty-six 1st year nursing students were selected with simple random sampling method. Four instruments were used to collect data: TMHI-55 of Department of mental health, the perception test of seniority and observance of the Royal Thai Army Nursing College are 30 questions, the assessment review of seniority and observance of the Royal Thai Army Nursing College are 10 questions, and the open-ended questions interview. Their reliabilities were 0.88 and 0.856 respectively and the discriminant index was 0.20. The results were calculated using statistics of percentage, the mean and the standard deviation.

Results: The female 1st year nursing students had mean age 18.46, GPA 3.68 and most of them choose to study here. When they were become to a nursing student, their stress level was normal. (M = 15.67, SD

= 4.91) In week 3, has the highest stress level because of studying. The factor of stress is in compliance with the rules and observance that cause changed in physical, Emotion, and behavior. The perception of 1st year nursing students with the rules and observance is good. The pre-post test score was statistically significant .01. The 1st year nursing students were satisfactory in seniority system and observance, but wanted to improve about the respect of the senior outside the college.

Review Summary and Analysis: The 1st year nursing students were stressed from strict behavior. Training military conducts makes the students understand in system and demand to conserve it. But also wanted to improve the appropriateness up to date for the students could live happily in the college and make good friendships and sisterhoods.

Keywords: ● *Stress* ● *Seniority and custom* ● *Nursing students*

Abstract no. 67**The Attitudes, Motivations and Intentions to Quit Smoking among Veteran Patients in Phramongkutklao Hospital**

**Nuttawan Jaiyen¹, Nannapat Sutasuk¹, Pongsaton Thanee¹, Ponsawan Wongchai¹,
Phattra Ratanapracharom¹, Phatsorn Taramak¹, Sitanan Ruengdecht¹,
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Introduction: In 2015, the veteran patients who injured from the violent situation in three southern borders of Thailand were admitted at Phramongkutklao Hospital a lot more. These patients have to spend the time for healing the wound more than other patients. Most of veteran patients are smokers so it impact to their process of wound healing, give longer time and cause a lot of complications for their body. That give the researchers want to know about the attitudes, motivations and intentions of smoking cessation in Phramongkutklao Hospital's veteran patients which leads to proper guidelines to smoking cessation in veteran patients.

Objective: To study and find the correlations between toxicity and hazards of smoking, attitudes, and motivations among smoking veteran patients who intends to stop their habits.

Research Design: Descriptive research

Method and Materials: Purposive sampling was used in this study. It was 36 veteran patients who were picked from all smoking veteran patients treated in Phramongkutklao Hospital from May 2016 to August 2016. The tools used in this study can be classified into 5 parts: survey about patients' profile, knowledge about toxicity and hazards of smoking, attitudes, motivations and intentions to stop smoking among veteran patients. The tools must exceed the qualification test with reliability of 0.72. The data are analyzed using the Descriptive statistic and Pearson's Product Moment Correlation Coefficient (PPMCC) formula.

Result: From the research, we found that the veteran patients were all men. Most of the sampled smokers belong to the age group from 21 to 30 years old, which is 52.8% of the total number of samples. Forty percent of the sampled smokers smoked every day. Fifty percent of them started smoking at 20 years old. Fifty-one point five percent of them were smoking 6-20 rolls per day. Forty-seven point six percent of them smoked to relax. One hundred percent of the sampled smokers in Phramongkutklao Hospital overlooked the toxicity and hazards of smoking. Seventy-two point two percent of them have moderate attitude to stop smoking but 97.2% have the high intention to stop smoking. The attitudes

of sampled smokers to stop smoking have moderate positive correlations with their intentions to stop smoking ($r = .424$) have statistical significance at .05.

Conclusions: The attitudes of sampled smokers to stop smoking have positive correlations with their intentions to stop smoking. It means that better attitudes the sampled veteran patients in Phramongkutklao Hospital have, the stronger are their intentions to stop smoking. We have to reinforce attitudes to stop smoking of veteran patients such as the activities to promote to quit smoking, self-help group and equipment substitutes for stop using cigarette such as nicotine gum

Keywords: ● *Attitudes* ● *Motivations* ● *Intentions* ● *Quit smoking* ● *Veteran patients*

บทคัดย่อที่ 68

นมมินทราซีน โมเดล: กับการเวชกรรมป้องกันโรคสครับไทฟัส ในพื้นที่ฝัก ร.21 รอ.

วีระ บุญโสม บุญยวีร์ เอมระดี จริญญาภู เกวี นพดล แสงจันทร์ นฤพน คุณตะสิงค์
ยุทธพงษ์ สุดสวาท วิษณุ บุญยอด เกียรติศักดิ์ สมศรี สุจิตรา สุขวิทย์ ทิพย์วรรณ ชื่นจิต
และ วุฒิกรณ์ รอดความทุกข์

กองวิจัย สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร

ความเป็นมา “นมมินทราซีน โมเดล” ได้รับการรับรองหลักการ จากกองทัพบกให้นำมาใช้ในกองทัพบก เมื่อวันที่ 21 ธันวาคม 2549 จากที่ประชุมคณะกรรมการกลั่นกรองผลงานวิจัยและพัฒนาการทหารด้านหลักการ กองทัพบก ครั้งที่ 1/50 เนื่องจากเป็นโมเดลที่ สถาบันวิจัยวิทยาศาสตร์การแพทย์ทหาร (สวพท.) โรงพยาบาลค่ายนมมินทราซีน และ ร.21 รอ. ใช้แก้ปัญหา กำลังพล ติดเชื้อก่อโรคสครับไทฟัส จากพื้นที่การฝึกได้ผลอย่างดียิ่ง โดยไม่พบกำลังพลติดเชื้อก่อโรคสครับไทฟัส ในการฝึกภาคสนาม ตลอดระยะเวลา 10 ปี ภายหลังเกิดการระบาดของโรคสครับไทฟัส ในกำลังพลที่ออกฝึกภาคสนาม ใน อ.บ่อทอง จ.ชลบุรี ในปี พ.ศ. 2545 โดยสรุปหลักการที่ ร.21 รอ. ใช้เตรียมทหารให้ปลอดภัยจากโรคที่มีในพื้นที่การฝึกหรือ “นมมินทราซีน โมเดล” คือ หาข้อมูลโรคที่เป็นปัญหาในพื้นที่การฝึก สำหรับใช้เป็นข่าวกรองทางการแพทย์ แจ้งข้อมูลผู้บังคับหน่วยทราบและวางแผนแนวทางป้องกันต่อไป แนะนำวิธีการป้องกันโรคให้กับกำลังพลก่อนออกฝึก หลังการฝึกแล้วควรเฝ้าระวังโรคให้กับกำลังพล

วัตถุประสงค์ เพื่อทราบปัญหาของโรคในพื้นที่การฝึกและวางแผนแนวทางป้องกันโรค ให้กำลังพลมีความรู้ วิธีการป้องกันโรคก่อนออกฝึก และหน่วยมีการเฝ้าระวังโรค

วิธีการ ในปี พ.ศ. 2556 ได้เกิดการระบาดของโรคสครับไทฟัสอีกครั้ง ในพื้นที่ฝัก ร.21 รอ. อ.ศรีราชา จ.ชลบุรี สวพท. โรงพยาบาลค่ายนมมินทราซีน และ ร.21 รอ. ได้นำ “นมมินทราซีนโมเดล” มาใช้เป็นแนวทางในการแก้ปัญหาโรคสครับไทฟัส จากพื้นที่การฝึกอีกครั้ง โดยดำเนินการสำรวจหาแหล่งรังโรคและพาหะนำโรคในพื้นที่การฝึก หาพื้นที่เสี่ยงต่อการติดเชื้อในพื้นที่การฝึก แจ้งข้อมูลให้ผู้บังคับบัญชาทราบเพื่อวางแผนนโยบายป้องกันโรค ให้ความรู้เรื่องโรคสครับ ไทฟัสต่อกำลังพลก่อนออกฝึกภาคสนาม แนะนำวิธีการป้องกันตัวจากการถูกตัวไร่ออนพาหะนำโรคกัดระหว่างฝึก รวมทั้งแจกจ่ายยาป้องกันแมลงเพิ่มขึ้น และมีการเฝ้าระวังโรคสครับไทฟัสภายหลังกำลังพลกลับจากการฝึกภาคสนาม

ผลการดำเนินการ พบว่า ไม่มีกำลังพลติดเชื้อก่อโรคสครับไทฟัส จากพื้นที่การฝึก ในการออกฝึกภาคสนามในครั้งต่อมา คือ ปี พ.ศ. 2557 และในปี พ.ศ. 2558 ผลจากแบบสอบถาม พบว่า กำลังพลทหารที่ต้องออกฝึกภาคสนาม มีความต้องการให้ดำเนินการตามหลักการ ของ “นมมินทราซีนโมเดล” ก่อนออกฝึกภาคสนาม ในระดับมาก ร้อยละ 76.8 (215/280) ปานกลาง ร้อยละ 16.7 (47/280) และระดับน้อย มีเพียง ร้อยละ 4 (11/280) และกำลังพลของ ร.21 รอ. มีความคิดที่จะให้นำ “นมมินทราซีนโมเดล” ไปใช้กับทหารหน่วยอื่นๆ ก่อนออกฝึกภาคสนามหรือก่อนออกไปปฏิบัติหน้าที่ตามแนวชายแดน ในระดับ มาก ร้อยละ 58.2 (163/280) ปานกลาง ร้อยละ 28.1 (79/280) และระดับน้อย มีเพียงร้อยละ 7.1 (20/280)

สรุป ในห้วงการฝึกกำลังพลมีความรู้ การป้องกันตนเองในการฝึก หลังจากการฝึกพบว่ากำลังพลไม่ป่วยเป็นโรคสครับไทฟัส

Keywords: ● นมมินทราซีนโมเดล ● โรคสครับไทฟัส ร.21 รอ.

Abstract no. 69**Novel AIP Blood Bank Information System****Army Institute of Pathology, Phramongkutklao Medical Center****Preamrudee Chaisuwirat***Blood Bank, Army Institute of Pathology, Phramongkutklao Medical Center*

Army Institute of Pathology (AIP) Blood Bank (ABB) of Royal Thai Army was found 39 years ago. Recently, about a decade ago, ABB created an electronic database-driven workflow system (Blood Bank Information System, BBIS) to serve donors and to keep records. However, not only technologies but also medical knowledge and practices have advanced rapidly. Moreover, the numbers of donors to be served at ABB and offsite services are continuously rising over the years. The existing early BBIS needs to be adjusted in order to better serve donors and to utilize modern automated equipment. However, the database of the BBIS, available at the time, is not suitable to make changes.

- To build a new Blood Bank Information System (BBIS) using modern technology as well as free open source software, database, and operating system.

- To provide convenience with privacy to blood donors, e.g., donor can make an appointment and answer a screening questionnaire in order to donate his blood in advance via a secured internet protocol.

- To increase quality, efficiency, and safety in serving blood donors, performing blood tests, and managing blood products.

- To electronically connect to analyzer machines and external systems such as Laboratory Information System (LIS), Hospital Information System (HIS)

- To monitor and improve blood bank staff at work, equipment usages, and reagent spending.

- To provide a wireless network connected to BBIS to improve donor servicing.

- To create a mobile BBIS to serve offsite donors (the mobile BBIS database has the same information as the main BBIS database and can make main database updating).

- To use a modern suitable database designed to handle future changes in BBIS workflow and medical knowledge and practices.

Keywords: ● *BBIS (Blood Bank Information System)*

Abstract no. 70**Model and Satisfied of Advanced Army Medical Officer Course**

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and Pairut Meelarp**

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Background: Army medical field service school has developed electronic learning for advanced army medical officer course. Since 2553, the electronic version of the ninth edition of the 24-week study period in the early stages of education in 1:13:10 subsequently develop a model 1: 17: 6 from policy of Army Training Center, Royal Thai Army to reduce the period of study at the school, reduced budget and help unit for loss personnel to work. Advanced Army Medical officer course the current model of 1: 13: 6, but did not evaluate in this model. That is suitable only and the students are satisfied or not. In order to improve the curriculum accordingly. And maximum benefits for student. Army Medical Department, Royal Thai Army and nation. Including the development and course model. In the study of electronic courses elsewhere next.

Objective: To study the appropriate model for Advanced Army medical officer course, electronic learning version. And satisfaction of those who attended electronic learning of advanced army medical officer course

Methadology: Cross sectional descriptive study, sample consisted of 110 army medical officer students in advanced army medical officer course without sampling. Data was collected by self administrative questionnaire 5 part of 73 items including general information, the opinion about the course. The current subjects should/should not electronic study, a proper education model and satisfaction in the study. Data were analyzed using descriptive statistics

Results: All 94 respondents (response rate 85.45%). Most female (69.1%), average age 37.48 ± 6.07 years majority qualified of samples were nurses (55.3%) the opinion about this course is a good level (3.5 points). Subject of study should notbe study in electronics include military map reading, general staff subject,medical field service subject, medical subject. The majority (53.2% of participants) of proper model from the course should be 1:13:10 model (orientation: study on electronic studies : study at the Army Medical Field Service School) and participant satisfied level is medium level (48.9%), second majority is high level (40.4)

Conclusion: The suitable model for advanced army medical officer course is 1 week for orientation 13 weeks for self electronic learning and 10 weeks for study at army medical field service school. And the level of Army medical officer students' satisfied is medium level.

Keywords: ● *Advanced army medical officer course* ● *Model of education, satisfaction*
● *Electronic learning*

Abstract no. 71**Association between Smoking, Alcohol Consumption, Exercise and Metabolic Syndrome in Royal Thai Army Personnel**

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and Chaiyaphruk Pilakasiri**

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Background: Metabolic Syndrome (MetS) is a cluster of disorders that is the risk for cardiovascular diseases. It also increases the risk of type 2 diabetes. Currently, it is believed that the cause of the occurrence of the MetS is insulin resistance and obesity, in particular, the abdominal obesity which is also a cause of hypertension. The treatment of the MetS focuses on lifestyle changes, reducing health risk behaviors such as smoking, drinking alcohol, stress, as well as changing eating habits by reducing the energy from food intake and increasing exercise.

Objective: To study association between smoking, alcohol consumption, exercise and MetS in Royal Thai Army (RTA) personnel.

Methodology: The design of this study was a cross sectional research conducted in 2,809 samples. All of them worked in RTA units in Bangkok and suburban and received annual health checkup from Armed Forces Research Institute of Medical Sciences (AFRIMS), Royal Thai Army in the fiscal year 2014. The components of the MetS were defined by Joint Interim Statement (JIS) criteria. Logistic regression analysis was used to determine the association between smoking, alcohol consumption, exercise and MetS with 95% confidence interval and p-values of less than 0.05 were considered statistically significant.

Results: Univariate logistic regression analyses showed that ex-smoked, current smoking, occasional drinking, regular drinking, no exercise and occasional exercise significantly associated with MetS. Multivariate analysis after adjusted for sex, age, smoking, alcohol consumption and exercise, the MetS significantly associated with no exercise and occasional exercise and adjusted OR increased from 1.52 to 2.03 (95%CI: 1.51-2.72) and 1.53 to 1.67 (95%CI: 1.35-2.07) respectively.

Conclusion: Modification of lifestyle factors such as weight loss, improved diet, and regular physical exercise has considerable potential for primary prevention of the MetS. Commanders at all levels of the RTA should give policies to support activities to promote health, which will make the RTA personnel have a healthier and better quality of life.

Keywords: ● Metabolic syndrome ● Health behavior ● Royal Thai Army

บทคัดย่อที่ 72

การศึกษาปัจจัยที่มีความสัมพันธ์กับความพึงพอใจของผู้ใช้บริการที่มีต่อการให้บริการของหน่วยเอกซเรย์คอมพิวเตอร์ โรงพยาบาลพระมงกุฎเกล้า

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บทนำ งานด้านการให้บริการผู้ป่วยถือเป็นงานสำคัญในการที่จะพัฒนาให้มีระบบบริการที่ดีมีคุณภาพ ได้มาตรฐาน เกิดการปรับปรุงให้มีประสิทธิภาพเหมาะสม จึงมีความจำเป็นอย่างยิ่งที่โรงพยาบาลจะต้องมีการรับฟังเสียงสะท้อนจากผู้ให้บริการ ผู้วิจัยได้นำทฤษฎีของเดย์และแอนเดอร์เซน มาใช้ในการประเมินความพึงพอใจ 6 ด้าน ได้แก่ ความสะดวกที่ได้รับจากบริการ การประสานงานของบริการ ทัศนคติของผู้ให้บริการ ข้อมูลที่ได้รับเมื่อใช้บริการ คุณภาพของการให้บริการและค่าใช้จ่ายเมื่อได้รับบริการ เพื่อให้ได้ข้อมูลที่สามารถนำไปใช้เป็นแนวทางในการจัดบริการแก่ผู้ให้บริการได้อย่างมีประสิทธิภาพ

วัตถุประสงค์ เพื่อศึกษาระดับความพึงพอใจและปัจจัยที่มีความสัมพันธ์กับความพึงพอใจของผู้ใช้บริการ ที่มีต่อการให้บริการของหน่วยเอกซเรย์คอมพิวเตอร์

รูปแบบการวิจัย วิจัยเชิงพรรณนา (descriptive research)

วัสดุและวิธีการ กลุ่มตัวอย่างเป็นผู้ที่เข้ามารับการตรวจเอกซเรย์คอมพิวเตอร์ในโรงพยาบาลพระมงกุฎเกล้า ในช่วงเดือนสิงหาคม ปี พ.ศ. 2557 เป็นผู้ที่มียายุ 20 ปีขึ้นไป จำนวน 142 คน แบบสอบถามเป็นแบบมาตราประมาณค่า 5 ระดับ มีความเชื่อมั่น 0.87 วิเคราะห์ข้อมูลโดยใช้ความถี่ ร้อยละ ค่าคะแนนเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน วิเคราะห์ความสัมพันธ์ด้วยไครส์แควร์ สหสัมพันธ์แบบเพียร์สันและการวิเคราะห์เนื้อหา

ผลการวิจัย ความพึงพอใจจากผู้ให้บริการที่มีต่อการให้บริการของหน่วยเอกซเรย์คอมพิวเตอร์ ในด้านทัศนคติและความสนใจต่อผู้ให้บริการมีค่าคะแนนเฉลี่ยสูงสุดเท่ากับ 4.57 ด้านค่าใช้จ่ายมีค่าคะแนนเฉลี่ยต่ำสุด 4.18 ปัจจัยส่วนบุคคลได้แก่ เพศ อายุ สถานภาพ อาชีพ รายได้ สิทธิการรักษาและโรคประจำตัว ไม่มีความ สัมพันธ์กับความพึงพอใจของผู้ใช้บริการที่มีต่อการให้บริการของหน่วยเอกซเรย์คอมพิวเตอร์ แต่พบว่า คุณภาพชีวิตมีความสัมพันธ์ทางบวกกับความพึงพอใจของผู้ใช้บริการที่มีต่อการให้บริการของหน่วยเอกซเรย์คอมพิวเตอร์ที่ระดับนัยสำคัญทางสถิติที่ระดับ .01 ($r = .258$) ผู้ใช้บริการมีความเห็นว่าจุดเด่นของบริการหน่วยเอกซเรย์คอมพิวเตอร์ ได้แก่ ทัศนคติและความสนใจของเจ้าหน้าที่ คุณภาพบริการ และความสะอาดของสถานที่ ข้อเสนอแนะเพื่อพัฒนาได้แก่ จัดเจ้าหน้าที่ให้เพียงพอ ระบบการนัดที่รวดเร็ว รสชาติสารละลายที่ดี และการพัฒนาศักยภาพของเจ้าหน้าที่

วิจารณ์และสรุป ในภาพรวมความพึงพอใจของผู้ใช้บริการที่มีต่อการให้บริการของหน่วยเอกซเรย์คอมพิวเตอร์อยู่ในระดับมาก อย่างไรก็ตามข้อเสนอแนะของผู้ใช้บริการได้แก่ ด้านเจ้าหน้าที่ คุณภาพบริการ ที่หน่วยเอกซเรย์คอมพิวเตอร์ ควรนำไปพัฒนาปรับปรุง เพื่อช่วยให้สามารถให้บริการได้อย่างมีประสิทธิภาพ

คำสำคัญ ● ความพึงพอใจของผู้ใช้บริการ หน่วยเอกซเรย์คอมพิวเตอร์

Abstract no. 73

Comparative Study of HIV Seroprevalence and Trends of Blood Donor and General Conscripts in Bangkok and Perimeter between 2010 and 2014

Boonterm Saengdidtha, Triyos Tharaporn, Premrudee Chaisuwirrat, Thanya Rojpanich and Napaporn Winijnaiyapark

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Background: HIV infection is still an important communicable disease of Thailand. Many organizations have roles in solving this problem. The Army Institute of Pathology (AIP) has involved in 2 sources of HIV data of conscripts in Bangkok and perimeter, i.e., blood donor screening of around 1,000 persons/year and country HIV surveillance program among Thai young men of around 10,000 persons/year were tested in the first month of their entry to the Royal Thai Army.

Objectives: To compare the prevalence and trends of HIV infection among general and donor conscripts in Bangkok and perimeter between 2010 and 2014.

Methods: Data of total conscripts and conscripts with positive HIV in each group were collected and analyzed for prevalence of HIV infection for each year. Then, the prevalence of each group was compared between 2010 and 2014. The average prevalence of each group was also calculated and compared.

Results: The HIV prevalence percentage of donor conscript: general conscripts between 2010 and 2014 are: 0.62:0.40, 0.52:0.60, 0.16:0.60 and 0.41:0.52, respectively. The average HIV prevalence of the 2 groups for this time period is 0.35% and 0.56%, respectively. The HIV prevalence in the donor group is lower than the general one because the donors must be screened. Therefore, the conscript who knows his positive HIV status don't go to donate blood and the one who has risk of transfusion-transmitted diseases was deferred. These data do not show the significance decrease or increase of HIV infection among conscripts in Bangkok and perimeter and it seems to be stable.

Conclusions: The HIV prevalence of the general conscripts is generally higher than the donor one. The HIV data of the donor group may be used as HIV incidence of this group if the conscripts were notified their HIV status before their blood donations. Continuous surveillance should be done to check the HIV trends with appropriate intervention to the goal of getting to zero new HIV infections of Thailand.

Keywords: ● HIV ● Prevalence ● Trends ● Conscripts ● Blood donor ● Bangkok

Abstract no. 74**A Randomized, Double-blind, Controlled Trial to Evaluate Protective Effect of White Kidney Bean Extract on Kidney Injury in Obese Thai Adult Population**

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Background: Obesity is recognized as a major health problem that has a significant impact on progression of kidney disease characterized by a progressive loss in renal function. A natural white kidney bean extract has clinically proved to assist weight control in role of alpha-amylase enzyme inhibitors known as carb controller. It has also shown anti-inflammatory and anti-oxidative effects.

Objectives: To evaluate the potential of white kidney bean extract on reno-protective effects and obesity-related disease control among obese population.

Methods: Eligible obese subjects with body mass index (BMI) between 25 to 33 kg/m² will be recruited into the 12 weeks double-blind study and randomized to white kidney bean extract 1,335 mg/day (low dose group) or 3,000 mg/day (high dose group) or placebo in a 1:1:1 ratio. Metabolic parameters and urinary kidney injury biomarkers including urinary cystatin c-creatinine ratio (UCCR) and urinary albumin-creatinine ratio (UACR) will be assessed.

Results: A total of 108 obese subjects were recruited in the study. At baseline, there were no significant difference in mean age, body weight, BMI, blood pressure, serum creatinine, high sensitivity-CRP, UCCR and UACR among low dose group, high dose group, and placebo group. After 12-week study period, body weight did not change in either low dose or high dose group but mean UCCR significantly decreased in low dose group ($p = 0.012$) and in high dose group ($p = 0.009$). There were no significant change of UCCR from baseline in placebo group. It revealed that, median change of UCCR were significantly different between low dose group compared with placebo group (-0.05 vs. -0.01 $\mu\text{g}/\text{mg}$ creatinine, $p = 0.043$), and also significantly different between high dose group compared to placebo group (-0.06 vs. -0.01 $\mu\text{g}/\text{mg}$ creatinine, $p = 0.023$). Moreover, mean change of UACR among three groups (-0.83 ± 1.59 vs. -2.05 ± 2.01 vs. 0.77 ± 3.07 $\mu\text{g}/\text{mg}$ creatinine in low dose, high dose and placebo groups, respectively) were significantly different ($p = 0.001$). Along the study period, serious side-effects were not reported.

Conclusions: A natural white kidney bean extract when used as supplement in obese subjects can play a role in both reno-protective effects and weight control. Anti-oxidant and anti-inflammation of white kidney bean extract supplement can assist prevent obesity-related kidney injury.

Keywords: ● White kidney bean extract ● Obesity ● Urinary cystatin ● Albuminuria

บทคัดย่อที่ 75

ไวรัสตับอักเสบบีและภูมิคุ้มกันในบุคลากรห้องปฏิบัติการ วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า

(Hepatitis B virus and immunization in PCM. LAB.)

เพชร หัตสนา กฤติกา ชุมพลวัชร ราชัญ โศภณม ปริยพันธ์ โตบุญลือภพ กรกฎ แสงเกตุ
และคณะ

แผนกห้องปฏิบัติการและวิจัย กองสนับสนุน วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า

บทนำ การติดเชื้อไวรัสตับอักเสบบีเป็นปัญหาสาธารณสุขที่สำคัญของโลก เชื้อนี้ติดต่อทางเลือดและเยื่อที่สัมผัสกับเลือดหรือสิ่งคัดหลั่งที่มีเชื้อ หากติดเชื้อไวรัสตับอักเสบบีไม่ว่าจะมีอาการหรือไม่ อาจมีเชื้ออยู่ในร่างกายเป็นเวลานาน อาจกลายเป็นผู้ติดเชื้อเรื้อรัง ซึ่งมีโอกาสเป็นโรคตับอักเสบบีเรื้อรัง ตับแข็ง มะเร็งตับ และทำให้เสียชีวิตได้ ในประเทศไทยพบความชุกประมาณร้อยละ 3-10 เป็นการติดเชื้อไวรัสตับอักเสบบีเรื้อรัง (Chronic hepatitis B, CHB) หรือพาหะ (Carrier) ซึ่งหมายถึงการตรวจพบ Hepatitis B Surface Antigen (HBsAg) ในเลือดเป็นเวลานานกว่า 6 เดือน เป็นภาวะที่ซับซ้อนซึ่งเกิดจากอิทธิพลของไวรัสและร่างกายของผู้ติดเชื้อทางปฏิบัติการตรวจพบ HBsAg เป็นจุดเริ่มต้นที่แสดงถึงการติดเชื้อไวรัสตับอักเสบบีเรื้อรัง

วัตถุประสงค์ เพื่อสร้างเสริมภูมิคุ้มกันโรคไวรัสตับอักเสบบีในบุคลากรห้องปฏิบัติการ วพม.

วัสดุและวิธีการ กลุ่มตัวอย่างเป็นบุคลากรที่ปฏิบัติงานในห้องปฏิบัติการแผนกห้องปฏิบัติการและวิจัยกองสนับสนุนวิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า จำนวน 20 นาย ตั้งแต่ อายุ 23 - 56 ปี เป็นเพศชาย 9 คน และเพศหญิง 11 คน

ผลการศึกษา บุคลากรห้องปฏิบัติการได้รับการตรวจเลือดหาเชื้อไวรัสตับอักเสบบี (HBsAg) และหาภูมิคุ้มกันต่อไวรัสตับอักเสบบี (anti HBs) และ anti - HBc ทุกราย ก่อนได้รับการฉีดวัคซีนป้องกันไวรัสตับอักเสบบี พบว่า มีบุคลากรเป็นพาหะไวรัสตับอักเสบบี จำนวน 2 ราย (HBsAg ให้ผลบวก และ anti - HBc ให้ผลบวก) คิดเป็นร้อยละ 10

วิจารณ์และสรุปผล จากผลการศึกษาพบว่า บุคลากรแผนกห้องปฏิบัติการและวิจัย กองสนับสนุน วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า มีพาหะไวรัสตับอักเสบบี จำนวน 2 คน และมีภูมิคุ้มกันไวรัสตับอักเสบบี จากการฉีดวัคซีนไวรัสตับอักเสบบี จำนวน 18 คน (90%) ผู้เป็นบุคลากรทางการแพทย์โดยเฉพาะบุคลากรในห้องปฏิบัติการ

Keywords: ● ไวรัสตับอักเสบบี ● วัคซีนไวรัสตับอักเสบบี

Abstract no. 76

Morgagni Diaphragmatic Hernia in A 5-year-old Girl with Down Syndrome Who Presented with Persistent Abnormal Chest X-ray Three Years after Repair of Ventricular Septal Defect

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Background: Although most cases of congenital diaphragmatic hernia present with respiratory distress occurring shortly after birth, some cases can be asymptomatic and discovered incidentally on imaging studies during childhood period.

Objectives: We report a girl with down syndrome status-post repair of ventricular septal defect (VSD) who presented with persistent abnormal chest X-ray (CXR).

Materials and Methods: Retrospective chart review and review of literature were performed.

Results: A 5-year-old girl with down syndrome status post repair of VSD 3 years ago was referred to our pediatric pulmonary service with persistent abnormal chest X-ray (CXR). Six months ago she suffered from community-acquired pneumonia when she presented with low-graded fever with cough. Bilateral fine crepitation was noted on chest auscultation. Complete blood count showed leukocytosis. Right middle lobe alveolar infiltration was seen in her CXR. She was diagnosed bacterial pneumonia and treated with intravenous antibiotics. Her clinical symptoms gradually improved and was discharged home with oral antibiotic five days after admission. One month later, despite clinical well-being and normal physical examination, cystic degeneration of previous alveolar infiltration was seen in her chest X-ray. She was scheduled for computed tomography of the chest (CT chest) to investigate the nature of this abnormalities. Upon reviewing of her CT chest, right-sided diaphragmatic hernia was diagnosed. We, then, reviewed all of her medical records and previous CXR done at our hospital. Her medical records revealed that she developed dyspnea with signs of congestive heart failure one week after birth. All previous CXRs did not show abnormalities in the right lower lung field. Even though most diaphragmatic hernias are congenital, acquired defect following cardiac surgery were demonstrated in at least 2 case reports and could be a differential diagnosis in this patient. Intraoperative findings in this case showed a single defect in the anterior part of right hemi-diaphragm. Hernial sac as well as accessory right hepatic lobule were identified. These findings suggest that the defect is congenital in nature and unlikely to occur

as a complication of prior cardiac surgery. Congenital right-sided Morgagni diaphragmatic hernia was our final diagnosis. The patient has been doing well afterwards.

Conclusion: Morgagni diaphragmatic hernia could occur after cardiac surgery as seen in this case. Definite diagnosis may need to be elucidated during surgery. Surgical repair with careful inspection can be both diagnostic and therapeutic in this particular circumstance.

Keywords: ● *Congenital diaphragmatic hernia* ● *Acquired diaphragmatic hernia* ● *Open cardiac surgery*

Abstract no. 77**Acute Kidney Injury in Pediatric Following Russell's Viper Envenoming: A Case Report**

**Nanthawan Khusuwan, Adisorn Lumpaopong, Konggrapun Srisuwan,
Sumeth Termmathurapoj, Chantida Subun and Pawarisa Saisawad**

Snake bite is the important healthcare issues in worldwide especially in the tropical area. In Thailand, the prevalence of snake bite is 8,000 - 10,000 case per year, 12-18 cases per 100,000 populations; with the mortality less than 10 cases per year. Russell's viper bite is the common poisonous snakes in the country however there is a few specifically report in pediatrics about acute kidney injury. In present study, we reported an 11-year-old boy who developed oliguria, metabolic acidosis, increasing blood urea nitrogen and serum creatinine after bite. Blood urea nitrogen and serum creatinine were 98 mg/L and 8.9 mg/dL, respectively at day 5. Acute hemodialysis was performed. Renal biopsy revealed mild mesangial proliferation, interstitial edema and acute tubular necrosis. Acute kidney injury was recovered with blood urea nitrogen 18 mg/dL and serum creatinine 0.9 mg/dL. This patient is stable with normal renal function during the follow up period. In conclusion, we would like to report a child who had acute kidney injury after Russell's viper bite. Monitoring renal function with acid-base status and preparing for renal replacement therapy are the important roles in pediatrics after Russell's viper bite.

Abstract no. 78**Body Frame Size is a Risk Factor of High Blood Pressure**

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Chanida Pachotikarn⁴**

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Background: Hypertension is a leading cause of cardiovascular morbidity and mortality. The traditional risk factors of high blood pressure are age, male gender, weight, body mass index, waist, circumference, and body fat distribution. No previous studies have been demonstrated the frame size as a risk of high blood pressure. We aimed to determine the correlation of frame size and blood pressure in Thais.

Methods: A cross sectional study was done in 7 provinces by stratified cluster random sampling. Thai healthy male and female age 20 to 70 were asked to participate in the study. Blood pressure and anthropometric measurement were done at least three times. Frame size was performed by measuring elbow and wrist breadths.

Results: Three thousand-two hundred and ten were male and 5,054 were female. Coefficient of estimation (β) was stronger in elbow breadth than in waist circumference both male and female (6.15 vs. 0.42 and 5.29 vs. 0.41, respectively).

Conclusion: This is the first study demonstrated that elbow breadth, as a body frame size, has a strong correlation with blood pressure in human

Abstract no. 79**A National Anthropometric Examination Survey in Thailand**

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Background: One of the accurate method for assessment of nutritional status is using anthropometry measurement. However, the body frame size of the human is difference among race and ethnicity. We aimed to identify the body frame size of Thais and compare to the Caucasians.

Methods: A cross sectional study was done by stratified cluster random sampling in 5 regions of Thailand including Bangkok, the capital city. Thai healthy male and female age 20 to 70 were asked to participate in the study. Anthropometric measurements were done by standard method at least three times. Frame size was performed by measuring elbow and wrist breadths.

Results: We enrolled 8,364 participants in the study. Three thousand-two hundred and ten were male and 5,054 were female. Average mean $\pm$ SD of age in male and female were 40.33 ± 13.07 and 40.79 ± 12.32 years, respectively. According to the elbow breadth, the large frame size in male age 18-74 year-old was ranged between 7.1-7.4 cm. while female was 6.6-7.1 cm. When compared to frame size of the population in NHANES of the United State, we found that Thais have smaller body frame size than Americans. Thus, anthropometric measurement data of NHANES could not be used to assess the nutritional status in Thai people.

Conclusion: Thai people have smaller body frame size than Americans. The tables of anthropometric measurement of Thais should be used to assess nutrition status instead of US-NHANES.

Abstract no. 80**Handgrip Strength as A Good Alternative Nutritional Marker in Chronic Hemodialysis Patient****Vorachat Reslee and Ouppatham Suppasindh***Department of Medicine, Phramongkutklao Hospital*

Background: Chronic hemodialysis (HD) patient often experiences malnutrition. However, serum albumin has limitations as a nutritional marker among those populations because it is affected by inflammation, volume status and dialysate protein loss. Handgrip strength, a simple method and easily performed, has previously been shown to correlate with lean body mass in elderly patient and patient with chronic illness. However, it is never been used as a routine nutrition monitoring in patient undergoing dialysis.

Objective: To demonstrate the associations between handgrip strength, serum albumin and serum creatinine in chronic HD patients

Method: We prospectively enrolled 211 chronic HD patients in multi-hemodialysis centers in Bangkok during January 2013 to December 2013. Each patient was asked to perform handgrip strength by digital handgrip dynamometer (Takei A5401, Japan) within 5 seconds. Patient's characteristic, serum creatinine and albumin within 3 months were collected.

Results: Average handgrip strength was 28.78 ± 8.2 kg. Handgrip strength was statistically associated with age, sex, serum creatinine and serum albumin. After adjustment for age and sex, handgrip strength was significant correlated with serum creatinine and serum albumin.

Abstract no. 81**Clinical Application of Salinity Meter to Monitor Daily Salt Consumption from Spot Urine Samples**

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Introduction: High salt consumption appears to be important in the pathogenesis of hypertension and cardiovascular outcomes. However, it is difficult in societies to estimate salt intake with complete collection of 24-hour urine sodium. Salinity meter is an easy-to-use tool to measure sodium in liquid food, but regular Thai food usually appears in semi-solid or solid form.

Objective: To demonstrate that salinity meter could be used in spot urine samples instead of food to monitor high salt consumption.

Methods: The 24-hour urine and consecutive morning spot urine samples were collected from non-renal, non-liver disease participants. All urine samples were tested for sodium by standard measurement (Ion-selective method, Cobas 6000, ROCHE, Germany) and salinity meter (Conductivity method, GiMi Sang-gung SB-2000, Korea). Correlation coefficient and linear regression model was performed and classifier performances were calculated.

Results: A total of 110 urine samples were collected. Average of sodium concentration in standard 24-hour urine and spot urine samples were 80.71 ± 40.49 and 75.23 ± 40.03 mEq/L, respectively. There was a significantly correlation between salt intake in 24-hour with standard method (mean 10.99 ± 7.41 g/day) and salinity meter method (mean 11.53 ± 7.43 g/day) ($r = 0.92$, $p < 0.001$). In addition, there was also a significant correlation between spot urine sodium concentration with standard method and salinity meter method ($r = 0.76$, $p < 0.001$). The sensitivity of salinity meter to detect sodium intake over 1,500 mg/day was 89.9% (95%CI: 82.2-95%) and over 2,000 mg/day was 90.3% (95%CI: 82.4-95.5%). The specificity of this method to detect sodium intake over 1,500 mg/day and over 2,000 mg/day were 54.5% and 41.2%, respectively.

Conclusion: This study demonstrates that salinity meter has a high sensitivity to evaluate high salt consumption and it is a practical tool to use as routine monitoring daily salt intake.

Keywords: ● Salinity meter ● 24 hour urine ● Spot urine

Abstract no. 82**Association of Valvular Calcification and Stage of Chronic Kidney Disease****Rattagan Kajeekul¹, Waraporn Tiyanon² and Ouppatum Supasyndh³**¹Resident, Department of Internal Medicine; ²Division of Cardiology, Department of Medicine; ³Division of Nephrology, Department of Medicine, Phramongkutklao Hospital**Background:** Vascular calcification is a major mineral bone disorder in chronic kidney disease (CKD) patient. The previous studies were shown that cardiac valves had been involved in this complication.**Objective:** To study the association of valvular calcification and stage of CKD.**Methods:** All CKD patients who had glomerular filtration rate (GFR) below 60 mL/min/1.73m² and undergone echocardiogram during January 2011 to January 2014 were studied. Patient's epidemiologic data and laboratory results were collected.**Result:** Three hundred and ninety one CKD patients were enrolled. Sixty percent were male with mean age of 73 year-old. The mean systolic blood pressure was 131.85 mmHg and diastolic blood pressure was 72.98 mmHg. The average GFR was 26.38 mL/min/1.73m² (G4). The study showed that mitral annular calcification had related to stage of CKD but had no relation with aortic calcification.**Conclusion:** Mitral annular calcification had related to the severity of CKD.**Keywords:** ● *Chronic kidney disease* ● *Valvular calcification*

Abstract no. 83

Protective Effects of Oral L-Arginine Supplement in Patients with Chronic Kidney Disease after Intravenous Contrast Media Injection: A Randomized Controlled Trial

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Background: Contrast-induced acute kidney injury (CI-AKI) is a common complication in hospitalized patients. Nitric oxide-signal transduction plays an important role in prevention of CI-AKI. L-Arginine is an amino acid involved in ammonia detoxification, and is well known as a precursor to nitric oxide, a key component of endothelial-derived relaxing factor.

Objective: To examine the efficacy of oral L-arginine for preventing decline of renal function after contrast media injection in chronic kidney disease (CKD) patients.

Methods: This is a prospective randomized, double blind, placebo controlled trial among CKD stage 3-4 patients undergoing coronary angiography or computer tomography. Eligible patients were randomly assigned to two groups: (1) arginine 3 g/day or 6 capsules per day, and (2) placebo 6 capsules per day for 3 days before contrast media injection. Serum cystatin C, serum creatinine and estimated GFR was measured at baseline and 48-72 hours after procedure.

Results: A total of 47 patients were randomized; 18 to arginine, and 29 to placebo. There were no significant differences between the arginine and placebo groups regarding baseline demographic and biochemical characteristics, including baseline GFR (67.02 ± 20.04 mL/min/1.73 m² versus 68.46 ± 20.82 mL/min/1.73 m²). In particular, the incidence of CI-AKI which was defined as an absolute increase of serum creatinine ≥ 0.3 mg/dL or 25% relative decrease of GFR within 3 days was zero in the arginine group and 13.8% (4 patients) in the placebo ($p = 0.283$). The mean decrease in estimated GFR was significantly different in the both groups (arginine group: -1.2 ± 5.7 versus placebo group: -9.71 ± 14.02 mL/min/1.73 m², $p = 0.012$).

Conclusion: This study indicated that oral L-arginine supplement before intravenous contrast media injection can prevent decline of renal function in patients with CKD stage 3-4 over the standard hydration regimen in preventing CI-AKI.

Abstract no. 84**Serum Uric Acid Level is an End Stage Kidney Disease Risk in a Population-based Cohort Study**

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Introduction: Uric acid aggravates deterioration of kidney function via crystal and non-crystal dependent mechanisms. However epidemiological evidence for the significance of serum uric acid levels on the risk for developing end-stage kidney disease (ESKD) is scarce in a setting of population-based screening especially in Asian countries.

Objective: To evaluate the effect of serum uric acid level on incidence of impaired kidney function and ESKD.

Method: A total of 23,712 individuals from an integrated health care delivery system in the Thai army who participated for health checkups between July 1, 2006, and December 31, 2012 were screened. Only 18,390 participants (14,686 men, 3,704 women) older than 20 years for whom available for body weight, serum uric acid, and creatinine data with estimated glomerular filtration rate (eGFR) over 60 mL/min/1.73m² were enrolled in the study. The cumulative incidence of chronic kidney disease (CKD, eGFR < 60 mL/min per 1.73 m²) and ESKD (eGFR < 15 mL/min per 1.73 m²) was calculated according to quartiles of baseline serum uric acid levels and significant high serum uric acid levels (≥ 7.0 mg/dL).

Results: The mean age of participants was 47.69 ± 6.69 years and body mass index was 24.71 ± 3.47 kg/m². Fourteen percent (n = 2,648) was diabetes and 65.2% (n=11,998) had high blood pressure. Average serum uric acid and eGFR were 6.29 ± 1.55 mg/dL and 87.84 ± 13.27 mL/min per 1.73 m², respectively. The incidence of CKD at 6 years follow up was 3.64/1000 person-year. A total of 11 patients (0.06%) of ESKD were observed. Participants with highest serum uric acid quartile (> 7.3 mg/dL) had a 3.42-fold increase in adjusted hazard ratio (HR) (95%CI: 2.19-5.32), compared to those with the lowest serum uric acid quartile (< 5.2 mg/dL). Moreover, serum uric acid ≥ 7 mg/dL were significantly increased risk of ESKD (adjusted HR 5.74 with 95%CI: 1.58-20.8, p = 0.008). Finally, every 1 mg/dL increasing of serum uric acid, eGFR would be declined 2.2 mL/min per 1.73 m².

Conclusion: Serum uric acid level is an independent risk of CKD and ESKD in Thai population. Strategies to control serum uric acid levels may reduce the population burden of kidney disease.

Keywords: ● Uric acid ● Kidney disease ● Population based

Abstract no. 85**Emergence of Vancomycin-resistant *Enterococcus* (VRE) in Phramongkutklao Hospital**

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Background: Enterococci emerged as important nosocomial pathogens and emergence of resistance to glycopeptide antibiotics, especially vancomycin is of special concern. The spread of vancomycin-resistant *Enterococcus* (VRE) is becoming a major public health issue.

Objective: The study aims to investigate the prevalence and trends in antimicrobial resistance of *Enterococcus* isolated from clinical specimens in our hospital.

Method: Retrospective descriptive study design was used to review *Enterococcus* with a special emphasis on vancomycin resistance. Data gathered from the tertiary care records of Phramongkutklao Hospital Royal Thai Army from the year 2011-2014 and 2015 (Jan-March). The prevalence of VRE for each year were computed.

Results: The significant trend of VRE was observed during the year 2011-2015 : continuing to have high prevalence from 0% (0/1275), 0.6% (8/1280), 0.2% (2/1154), 4.3% (54/1258), 5.5% (23/417) in the year 2011, 2012, 2013, 2014 and 2015 (Jan-March) respectively. There have been a highly significant emergence of VRE in our hospital since last year up until now. All VRE is *Enterococcus faecium*. For the year 2014, the rates of *Enterococcus faecalis* resistant to penicillin, ampicillin, high level gentamicin and vancomycin are 27.2%, 4.8%, 29.4% and 0% respectively. The rates of *Enterococcus faecium* resistant to penicillin, ampicillin, high level gentamicin and vancomycin are 87.8%, 85.1%, 31.7% and 8.3% respectively. All isolates of *Enterococcus* are susceptible to linezolid.

Conclusion: VRE are an emerging infection problem in Phramongkutklao Hospital. However, the increasing resistance of VRE has been found in recent years. Surveillance of VRE is needed to control and prevent the spread of these resistant determinants in our hospital.

Keywords: ● Vancomycin-Resistant *Enterococcus* (VRE) ● *Enterococcus faecium*
● *Enterococcus faecalis*

Abstract no. 86

A Follow-up of the Quality of Life in Chronic Kidney Disease Undergo Hemodialysis Patients in Bangkla Hospital, Chachoengsao Province

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Backgroud: End Stage Renal Disease (ESRD) is an incurable disease causing a high level of disability, economic burden and also impact on quality of life in terms of physical function, mental and emotion, decrease productivity, job losses resulting in reduced or loss of financial incomes and family pressures. Thus, the aim of treatment should not be focused only for disease outcome but patient quality of life also. Bangkla hospital is the Community Hospital where hemodialysis has been performed for a period. From the study of self - care behavior and quality of life in End stage renal disease patient in Bangkla Hospital, Chacheongsao Province using WHOQOL - BREF - Thai in 2011. It was found that most of patient's overall quality of life were in medium level, so as quality of life in 4 domains; physical, mental and emotion, social relationships and environment domain. Thus, the purpose of this study's to follow-up quality of life and determine factors effecting in hemodialysis patient in Bangkla Hospital.

Materials and Methods: The mixed method model was used in the study. The total survey was done in hemodialysis patient, Bangkla Hospital by using WHOQOL-BREF-THAI questionnaire for assessed patient's quality of life. Then In-depth interview and content analysis method was used to collect data after inform consent was done. The interview focused on impact of hemodialysis to quality of life in 5 aspects; effects of disease itself or burden of disease, physical functioning and general health, social functioning and relationships, mental and emotion and environment.

Results: The comparison between result from WHOQOL-BREF-THAI questionnaire in 2011 and 2014 showed overall quality of life, psychological, social relationships and environment domain were improve from medium to high. Although, quality of life in physical domain were remain the same in medium, data showed that average score in this domain were increased. In qualitative study, In-depth interview was done to assess individual's perception in 5 aspects: 1) Effects of disease itself or burden of disease: Patient are tend to take make action in diet control and fluid restriction. The most important problem experienced by young patient is job losing or being unemployed. This will followed by financial burden, family issues, feeling of dependence, and thus, depression. 2) Physical functioning and general health:

patient still experienced limitation in their physical functioning because of fatigue, tiredness especially after hemodialysis was done and inability to carry heavy items. 3) Social functioning and relationships: most patient experienced only few problem in social adjustment and perceived low impact in this domain. Financial problems might be the most loading impact of this domain especially in the young who were main pillar of family. Also, decreasing of sexual demand were also problem in married life additional to caring of illness which leads to giver burden. However, the most important thing was supports and encouragements from family. 4) Mental and emotion: Younger patient were tend to get more stress and pressure in occupation which lead to financial problem and feeling of dependent and low self-esteem. 5) Environment: Most patient have no problem in communication between housing and hospital. However, travel expense was still problem in some patient. Most patient were satisfied in medical service received from Bangkla hospital officers.

Conclusion: This study shows that comparing with 2011 study in hemodialysis patient's quality of life, patients are tend to adapt in taking care of themselves to disease and are more realized in importance of self-care program. However, there are some problems that medical service team, hospital could hands on help for improving hemodialysis patient's quality of life.

Abstract no. 87**The Study of Knowledge and Attitude about Prevention and Control of Dengue Fever Compared with Health Care Criterion in Bang-khla Hospital, Chachoerngsao Province****Thissanamadee Bhrombibal¹, Patcharee Dirokkulwattana¹, Pimrada Hongswad¹,****Ram Rungsin², Tanongsan Tienthavorn³, Direk Pakkul⁴ and Kritsada Chareonrungrueang⁵***¹6th year Medical Cadet; ²Department of Military and Community Medicine, Phramongkutklao College of Medicine*

Background: The prevalence of Dengue infection tends to increase every year due to inappropriate health behavior, for example, doing activities of daily living in mosquito-abounded area. Moreover, people usually don't concern about factors which spread the infection to another households and don't co-operate with officers to control the infection such as eradicate mosquitoes and its dwelling. One of the studies from epidemiology department, ministry of public health showed that if community controls the mosquitoes by both chemical and physical methods, the number of patients will be deducted effectively. According to the statistic information, the researchers became interested in studying level of knowledge and attitude of health service customers in Bang-khla Hospital. The result will be applied in planning health promotion between health care service providers and customers which would make it more effective.

Objectives: To study knowledge and attitude about Dengue fever in health care service providers and customers in Bang-khla Hospital

Methods: The data was collected in health care providers and customers in Bang-khla Hospital during September 2015 to February 2016, after informed consent, participants would complete questionnaire in demographic data part and then in-depth interview was conducted. The in-depth interview would be continued until the data was saturated. Voice recording was done after informed consent and then was translated in papers for further analysis.

Result: The knowledge of customers who have no history and family history of Dengue fever was in moderate to fair level (most of them know about vector, transmission, common house mosquito life cycle, high season, risk group and signs and symptoms). But customers who have history and/or family history of Dengue fever or are now in hospital admission due to Dengue fever was better, in fair to good level, when compared with the former group. And almost all of health care service providers had good to excellent knowledge. They were better than customers.

The in-depth interview showed that all 3 groups: customers who have no history and family

history of Dengue fever, customers who have history and/or family history of Dengue fever or are now in hospital admission and health care service providers, had no difference in concern of disease severity. They all thought that Dengue fever was one of life-threatening conditions. Moreover, the in-depth interview also showed no difference in realizing the importance of prevention and promotion. But practically, some of these people ignore prevention methods even they knew how and suggest negatively that could not reduce risk of infection.

In the part of attitude, customers who have no history and family history of Dengue fever were compared with customers who have history and/or family history of Dengue fever or are now in hospital admission. Both groups knew basic prevention methods. But in practical way, the second group (customers who have history and/or family history of Dengue fever or are now in hospital admission) applied mosquito prevention methods more than the former groups. And health care service providers knew about methods (basic and advanced) more than customers in both groups and applied them appropriately.

Conclusion: The study of poor health behavior of customers and health care providers in Bang-khla Hospital compared with health care criterion of dengue infection in Bang-khla Hospital showed there was no difference of knowledge among groups. Health care service providers had done well with health care criterion of the hospital. But there still were outbreaks, may be because of mislead and inappropriate communication.

On the other hand, no difference was found in part of attitude and prevention. They all thought dengue fever was high severity disease and promotion was important and necessary. However, the study showed the contrast that co-operation was difficult and prevention was not applied enough to control disease.

If factors of poor health behavior can be controlled, there will be less Dengue infection outbreak.

Keywords: ● *Dengue fever* ● *Health care criterion* ● *Health care service providers* ● *Customers*
● *Qualitative study*

Abstract no. 88**A Qualitative Study of Perception on Self-management in Patients with Chronic Obstructive Pulmonary Disease (COPD)****Chanon Yooyen¹, Pongin Jittiwattanapong¹ and Ram Rangsin²**¹6th year Medical Cadet; ²Department of Community and Military Medicine, Phramongkutklao College of Medicine

Background: COPD is a type of obstructive lung disease characterized by chronically poor airflow which typically worsens over time and is now the fifth of all deaths globally projecting to increase by more than 30% in the next 10 years. The primary goal treatment of COPD is to decrease exacerbation, slow progression and improve quality of life in patients. While there is a growing body of evidence for the efficacy of self-management among patients with COPD, little evidence is available on the optimal content and methods for delivering self-management support in patients to preventing progression of disease and improving quality of life properly.

Objective: To Examine perception on self-management in patients with COPD

Study Design: Qualitative study

Materials and Methods: Patients with diagnosis of COPD who receiving treatment at Thaluang hospital were recruited. In-depth interviews were conducted and audio recorded. Data were analyzed using thematic content analysis.

Results: Data collected from a total of 21 people found that almost all patients had no knowledge and understanding of the disease, but all were good with drug compliance. The majority didn't not think that smoking is harmful and only quitted smoking when the symptoms was too worse to carry on, although all patients had already instructed to quit smoking already. Meanwhile, the patient had no information on their life-style modification such as exercise and diet due to lack of knowledge or had been given minimal information.

Conclusions and Recommendations: The inappropriate self-management in patients with chronic obstructive pulmonary disease were largely result from lack of knowledge. There should be a pulmonary rehabilitation program to educate patient further.

Keywords: ● COPD ● Self-management ● Qualitative study

Abstract no. 89

Prevalence and Associated Factors of Declined Glomerular Filtration Rate of Chronic Kidney Disease in Patients Participating in Chronic Kidney Disease Clinic in Thawung Hospital, Lopburi Province, October 2014 to September 2015

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Background: Chronic kidney disease is becoming a major health challenge worldwide, it's estimated that 2.9-13% percent of Thai populations was diagnosed as chronic kidney disease stage 3,4 and 5. Failure to recognize CKD results in neglect of its consequences and complications, and late referral of people with advanced CKD resulting in reduces lifespan significantly. Thus, we aim to study the associated factors of declined glomerular filtration rate of chronic kidney disease in patients participating in chronic kidney disease clinic in Thawung hospital, Lopburi province to prevent and to treat chronic kidney disease in patients being treated in this hospital from now on.

Objective: To determine prevalence and the associated factors of declined glomerular filtration rate of chronic kidney disease in patients participating in chronic kidney disease cancer clinic at Thawung Hospital, Lopburi Province, October 2014 to September 2015

Study Design: Analytic cross-sectional study

Materials and Methods: Chronic kidney disease patients participating in chronic kidney disease clinic at Thawung Hospital, Lopburi Province from October 2014 to september 2015 by secondary data. Data was analyzed by SPSS 15.0 factors associated with declined glomerular filtration rate was analyzed by Chi-square test.

Results: There are 78 from 122 chronic kidney disease in secondary data from chronic kidney disease clinic. Prevalence of declined glomerular filtration rate is 63.9%. There is one factor significantly associated with declined glomerular filtration rate of chronic kidney disease; systolic blood pressure. (OR 2.47) (95%CI: 1.08-5.65)

Conclusion: Prevalence of declined glomerular filtration in patients participating in chronic kidney disease in Thawung Hospital is 63.9% systolic blood pressure is significantly associated with declined glomerular filtration rate of chronic kidney disease.

Keywords: ● Prevalence ● Chronic kidney disease ● Glomerular filtration rate ● Associated factors

Abstract no. 90**Prevalence and Associated Factors of Stress in Health Care Workers of Sanamchaikhet Hospital, Chachoengsao Province**

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Background: Stress is an imbalance state of mental and physical of the person. This could be the result of a conflict between their needs and the expectations of society and culture. The causes have come from the people themselves, or the external environment, including family, friends, work, sedentary work performed social and economic status. American Psychological association found that 77% of people regularly experience physical symptoms caused by stress and 73% regularly experience psychological symptoms caused by stress. Over the past five years, 48% of people feel their stress has increased. And 48% who say stress has a negative impact on their personal and professional life. Department of Mental Health of Thailand shows that in the past 3 years (2011-2014) 20% of Thai people, or about 13 million Thai people, suffer from mental health problems such as stress, anxiety and about 3 million patients with psychiatric disorders such as schizophrenia, anxiety disorders, etc. And predicted to have more mental health problems in the year 2027. Nowadays health care workers have to confront With the number of days worked increased, effected the time to relax and obstacles to live with family members. There also a responsible for the management and development of academic and personal development, causing the additional documents and increasing of workload. All may cause the malfunction, risk of being sued. Therefore, the study of the prevalence and the factors causing stress in hospital personnel is important, for working together to find solutions and dealing with stress in the right way.

Objective: Research was aimed to study the prevalence, associated factors, sensitivity and symptoms of stress.

Methods: A cross-sectional study was conducted by using self-administered questionnaire in health care workers of Sanamchaikhet Hospital, Chachoengsao province. Questionnaire consists of 2 parts: demographic data (eg.sex, age, address, income, status, education) and Suanprung Stress Test-60 (SPST - 60). Data was analyzed in four parts - prevalence, associated factors, sensitivity and symptoms of stress.

Result: From descriptive statistics, the research participants enrolled in this study were 188 peoples from the total 231 targeted population; they could be categorized into 2 groups according to their level of stress.

1. There were 90 people with pathologic stress (the prevalence of pathologic stress in health care worker in Sanamchaikhet Hospital are 47.87%) (high to severe stress analyzed from Suanprung stress test-20). There were 98 people with normal stress (mild to moderate stress level analyzed from Suanprung stress test-20) which was 51.31% of the research participants.

2. Stressor that associated with pathological stress in health care workers in Sanamchaikhet Hospital that found in this research were family (67%), environment (66%), economy (53.7%), social (42%), personality (39.9%), work (25%)

Conclusion: The prevalence of pathologic stress in health care workers in Sanamchaikhet Hospital are 47.87% (about 90 people). Stressor that associated with pathological stress in health care workers in Sanamchaikhet hospital that found in this research were family, environment, and economy. Associated symptoms of stress that affected in this study were in immune system, endocrine system and sympathetic symptoms. Pathologic sensitivity to stress in pathologic stress group and non-pathologic stress group are significantly different statistically.

Keywords: ● *Stress* ● *Health care workers in hospital* ● *Prevalence* ● *Symptoms of stress*
● *Sensitivity of stress*

Abstract no. 91**Qualitative Study of Inadequate Exercise Causes and Factors of
Tha laung Hospital Personnel, Thalaung District, Lopburi Province****Kasinpiti Naprasit¹, Pat Rattanaserikulchai¹, Rattapong phetnoi¹ and Ram Rangsin²**¹6th year Medical Cadet; ²Department of Military and Community Medicine, Phramongkutklao College of Medicine

Ministry of public health survey shown top 5 death cause such as cancer, hypertension and cerebrovascular accident, acute coronary syndrome, renal failure and diabetes which effected from health behavior. So, health promotion makes people aware to health maintenance. Wonderfully, hospital staff who know benefit of health promotion act as risk health behavior including inadequate exercise.

The necessary of problem makes researcher study inadequate exercise causes and factors at Thalaung Hospital, Thalaung, Thailand 2015 and result lead to appropriated promotion. This research data is collected by in-depth interview to hospital staff from May 26, 2015 to July 30, 2015. Sample are 16, male : female is 4 (25%) : 12 (75%) and exercise : non-exercise is 6 (32.5%) : 10 (67.5%), result found non exercise cause is time for exercise, non-exercise promoted environment, discontinue regular exercise activity and self-attitude. Exercise stimulation is that realization to benefit of exercise and disadvantage of non-exercise cooperate with external promotion as health trend or familiar person invitation. Health promote measure is cause solving. Activity continuousness and facilities are looked for proper organization. Hospital crew know benefit of exercise but they don't prefer at that moment and do as hobby. Hospital should educate preventive exercise and keep health activities on. Hospital staffs want more exercise device and place. Health activities always wanted for their good health.

Abstract no. 92

Quality of Life and Their Associated Factors among Type 2 Diabetics Patients : A Case Study of Patients in the Diabetic Clinic at Sanam Chai Khet Hospital, Sanam Chai Khet District, Chachoengsao Province Year 2015

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Background: The patient's quality of life is a subjective outcome that used to assess the quality of care received and the results of interventions of the diabetic clinic programs. Limited evidence exists on the determinants of quality of life (QoL) specific to patients with type 2 diabetes (T2D). Further, it appears no study has identified the quality of life in type 2 diabetic patients that diagnosed and followed up in the diabetic clinic of Sanamchaikhet Hospital. The objectives of this study were to examine: (1) QoL of the type 2 diabetic patients; and, (2) determinants of QoL in patients with T2D.

Methods: A descriptive, exploratory evaluation study using qualitative methodology was performed. A cross-sectional study of the patients with type 2 DM in diabetic clinic of community hospital in Chachoengsao province, Thailand. The patients (diagnosed with T2DM and followed up in diabetic clinic within year 2015) with T2D (N = 280) are provided information on demographics (gender, age, marital status, religion, education, occupation, monthly income, income satisfaction, health utility right, status in family, and family characters), disease aspects (diagnostic age, duration of disease, admission rate, type of treatment sign and symptoms of disease, fasting blood sugar, HbA1C, and complications of disease) and quality of life (QoL) that measured by WHOQOL-BREF-THAI questionnaires. The calculated sample size is 227 people, and overall response rate was 89.86%. The linear regression analysis identified determinants of QoL in patients with T2D. Multiple regression models analysed the relationship between the significant determinants and QoL in patients with T2D. Factors significantly associated with QoL in T2D were further discussed.

Results: Some 70.5% of subjects with T2DM have high QoL, beside that all subjects have medium QoL. This show that no one have low QoL during the diabetic clinic program. There is 3.9% of subjects have low QoL in the physical domain. A statistically significant determinants of QoL in patient with T2DM was found, there were income satisfaction, status in family, oral antidiabetic agents and insulin injection, Fasting Blood Sugar and complications of disease that including diabetic nephropathy, diabetic

retinopathy and macrovascular complications. The relationship between the significant determinants and QoL was found that the lower education level ($b = -3.05$, $p < 0.05$), lower income satisfaction ($b = -5.15$, $p < 0.01$) and developed macrovascular complications (cerebrovascular accident, cardiovascular disease) ($b = -9.01$, $p < 0.05$) were associated with lower QoL. Family leader status ($b = 5.77$, $p < 0.05$) and increased fasting blood sugar level ($b = 4.92$, $p < 0.05$) were significantly associated with higher life satisfaction.

Conclusions: Health services should target medical and lifestyle factors and provide support for T2D adults to improve their physical domain of QoL. Additional psychosocial support for socioeconomically disadvantaged individuals living with this disease may be warranted. To improve QOL in patients with type 2 diabetes, health practitioners should also be aware that the early diagnosis and aggressive management of risk factors are necessary to prevent or delay the development of diabetic complications and the ensuring deterioration of QOL.

Keywords: ● *Quality of life* ● *Type 2 diabetes* ● *Patients with diabetes* ● *WHOQOL-BREF-THAI*

Abstract no. 93

The Effect of Post-hospital Follow Up and Re-ER Visit Rate in 30 Days in COPD in Bang Klra Hospital, Paknum Tumbon, Bang Klra Amphoe, Chachoengsao Province

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Background: Re-Emergency department (ED) visit in patients with chronic obstructive pulmonary disease (COPD) are common and costly thus to examine the effect of follow-up visit with a doctor within the first 30 days of hospital discharge on emergency department visit

Objective: To examine the effect of follow-up visit with a doctor within the first 30 days of hospital discharge on emergency department visit in a Thai rural community.

Study Design: Retrospective cohort study

Materials and Methods: Data was obtained from chronic obstructive pulmonary disease (COPD) patient in Bang Klra Hospital from January 1, 2011 through November 30, 2014. The study included 169 patients who met study-entry criteria. Cox proportional hazards model was performed to determine the risk of ED visits, with or without a follow-up visit during the first 30 days postdischarge.

Results: One hundred sixty-nine copd patient, 142 (84.02%) had a follow-up visit within 30 days. In a multivariate Cox proportional hazard-ratio (HR) model analysis, occurrence of a follow-up visit did not have a significant effect on the risk of the combined outcome of 30-day readmission and ED visit (HR 1.15, confidence interval 0.66-1.99; p = 0.622).

Conclusion: Postdischarge follow-up visits after hospitalization for COPD did not significantly reduce the risk of 30-day readmission or ED visit.