



Volume 11
Number 1
June 2020
p. 1-69

ISSN 2087-7021
E- ISSN 2338-3437

Health Science Journal of Indonesia

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Volume 11 Number 1

June 2020

p. 1 - 69

Editorial

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Risk factors associated with Dengue incidence: a household based case-control study

A case-control study related to vitamin and mineral intake in female adolescents with iron deficiency anemia

Evaluation of caregiver intervention on recovery of patient stroke: a systematic review



Health Science Journal of Indonesia



9 772 087 7021 39

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Printed by Badan Penerbit Fakultas Kedokteran Universitas Indonesia.

Subscription: The journal is published bi-annually and should be subscribed for a full year

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E-mail: hsji.indonesia@gmail.com.

Published by: Lembaga Penerbit Balitbangkes, National Institute of Health Research and Development (NIHRD) Ministry of Health Indonesia.

Accrediting number: 1391/E/2016

Health Science Journal of Indonesia

Volume 11, number 1, June 2020, pages 1-69

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WB 142

Feda Makkiyah, Shelly Nobel, Rahma Hida Nurriszka

Role of external ventricular drainage in spontaneous intraventricular haemorrhage patients in cileungsi district hospital

Health Science Journal of Indonesia 2020;11;1-8

Latar belakang: Perdarahan intraventrikel otak (intraventricular haemorrhage=IVH) memperburuk prognosis pada perdarahan intraserebri (intracerebral haematoma=ICH). Prosedur drainage cairan serebrospinal dari ventrikel otak (external ventricle drainage=EVD) bertujuan menurunkan tekanan intrakranial yang tinggi dikarenakan progresivitas IVH. Meskipun demikian, EVD merupakan prosedur pilihan karena terbukti tidak selalu efektif. Penelitian ini memperlihatkan faktor yang mempengaruhi keluaran pada pasien perdarahan intraventrikel dan apakah EVD memperbaiki keluaran pada pasien tersebut.

Metode: Penelitian potong-lintang retrospektif yang mengikutsertakan pasien IVH dan ICH yang berekstensi IVH (ICH-IVH) dengan EVD dan tidak di RSUD Cileungsi pada Januari sampai Desember 2018. Perbandingan antara grup EVD dan tidak berdasarkan jenis kelamin, umur, pulse pressure, Glasgow Coma Scale (GCS), jumlah perdarahan, skor volume perdarahan di ventrikel lateral, ketiga dan keempat pada CT scan, Charlson Comorbid Index (CCI) dan modified Rankin Scale (mRS). Untuk mengetahui faktor yang berperan dalam perbaikan keluaran dari pasien dengan EVD dilakukan analisis Spearman Correlation test (STATA 15).

Hasil: 100 pasien datang dengan diagnosis ICH spontan, 5 pasien IVH, dan 16 pasien ICH-IVH. Perdarahan di ventrikel empat merupakan pembeda yang signifikan antara pasien yang mendapatkan EVD atau tidak pada kelompok ICH-IVH ($p=0,035$). Skor GCS ($p=0,034$) berhubungan signifikan dengan prognosis ICH-IVH pasien dengan koefisien korelasi

0,671. EVD tidak memperbaiki keluaran dari IVH pasien atau ICH- IVH pasien.

Kesimpulan: GCS yang tinggi berkorelasi dengan prognosis baik pada grup ICH-IVH. Indikasi EVD pada adanya darah di ventrikel empat. EVD tidak memperbaiki keluaran pasien ICH-IVH spontan atau pasien IVH spontan tetapi sebaiknya dilakukan karena kemungkinan progresivitas menjadi hidrosefalus yang tipe penyumbatan yang dapat berakhir kematian.

Kata kunci: prognosis, IVH, ICH, EVD, RSUD Cileungsi

WS 285

Anggita Bunga Anggraini, Sundari Wirasmi

Treatment patterns of acute respiratory tract infection in children under-fives in Bogor, Indonesia

Health Science Journal of Indonesia 2020;11;9-14

Latar Belakang: Penggunaan obat yang tidak rasional menjadi masalah dalam pelayanan kesehatan, baik di negara maju maupun negara berkembang. Pengobatan Infeksi Saluran Pernafasan Akut (ISPA) tidak hanya tergantung pada antibiotik, tetapi dengan terapi penunjang untuk kasus yang disebabkan oleh virus. Penelitian ini bertujuan untuk mengidentifikasi pola pengobatan pasien ISPA pada balita di rumah sakit di Bogor, Indonesia.

Metode: Penelitian ini dilakukan dengan desain potong lintang menggunakan data rekam medis pasien balita dengan ISPA periode 1 Januari hingga 31 Desember 2015 di rumah sakit pemerintah dan swasta di Bogor. Analisis dilakukan dengan menggunakan uji Chi-Square.

Hasil: Rekam medis yang dikumpulkan dari kedua rumah sakit sebanyak 105 kasus. Pola pengobatan pada pasien ISPA rawat jalan ($n=32$)

di rumah sakit swasta adalah mukolitik (81,3%), dekongestan (56,3%), antipiretik (43,8%), dan antibiotik (6,3%). Sementara itu, rumah sakit pemerintah (n=8) menggunakan antibiotik (75%), antipiretik (50%), dan mukolitik (50%). Pola pengobatan pada rawat inap di rumah sakit swasta (n=27) adalah antibiotik (85,2%), antipiretik (63%), kortikosteroid (33,3%), dan mukolitik (25,9%), sedangkan rumah sakit pemerintah (n=38) adalah antibiotik (92,1%), antipiretik (89,5%), kortikosteroid (31,6%), dan mukolitik (71,1%). Faktor-faktor yang mempengaruhi pengobatan pada rawat jalan tidak dapat diidentifikasi karena kurangnya informasi klinis dan hasil tes laboratorium. Pemberian antibiotik pada pasien rawat inap di kedua rumah sakit tidak berhubungan dengan kadar leukosit dan suhu tubuh.

Kesimpulan: Penelitian ini menunjukkan bahwa penggunaan antibiotik untuk ISPA belum sesuai dengan pedoman klinis yang pemberiannya harus didahului dengan pemeriksaan klinis dan mikrobiologis. Kepatuhan terhadap pedoman klinis sangat penting untuk mencegah terjadinya resistensi antibiotik dan mengurangi terjadinya reaksi obat yang tidak diinginkan.

Kata kunci: Anak, antibiotik, infeksi saluran pernafasan akut, pengobatan

WF 300

Alinea Dwi Elisanti, Diany Yoke Savira, Efri Tri Ardianto

AFB smear positive 1+: a dominant factor in Pulmonary TB household transmission

Health Science Journal of Indonesia 2020;11;15-21

Latar belakang: TBC menjadi masalah kesehatan dunia, termasuk Indonesia karena kasus baru TB paru terus meningkat. Penelitian ini mengkaji faktor dominant yang mempengaruhi penularan kontak serumah pasien TB paru.

Metode: Studi observasional dengan desain analitik cross sectional ini menggunakan populasi seluruh penderita dan anggota keluarga pasien TB paru di Puskesmas Kedundung tahun 2015-2016. Sampel sejumlah 52 orang dihitung menggunakan rumus besar sampel infinity dan diambil secara konsekutif. Variabel penelitian meliputi perilaku pencegahan, Gradasi BTA dan penularan kontak

serumah. Pengumpulan data menggunakan lembar wawancara, lembar pengumpul data, sputum pot steril. Data dianalisis menggunakan uji Spearman Rank dan uji regresi logistik binary dengan tingkat signifikansi 0,05.

Hasil: Perilaku pencegahan (p=0.093), BTA positive 2+ (p=0.377) tidak berpengaruh terhadap penularan kontak serumah pasien TB paru, sedangkan BTA positive 1+ mempengaruhi penularan kontak serumah pasien TB paru (p= 0,007). Nilai Exp (B) BTA positif (1+) menunjukkan 12,144 artinya pasien BTA positif (1+) memiliki risiko 12,144 kali lebih tinggi menularkan ke kontak serumah dibandingkan dengan BTA positif (3+). Sedangkan pasien BTA positif (2+) memiliki risiko 3,328 kali menularkan ke kontak serumah dibandingkan dengan BTA positif (3+).

Kesimpulan: Pasien TB paru dengan pemeriksaan BTA positif (1+) menjadi faktor dominan yang mempengaruhi penularan kontak serumah pasien TB paru. Upaya komunikasi dan edukasi personal hygiene, tingkat kepatuhan pengobatan pasien TB paru perlu ditingkatkan untuk menekan kejadian baru TB paru.

Kata kunci: Gradasi BTA, TB Paru, Perilaku Pencegahan, Penularan Kontak Rumah Tangga

WS 132

Vita Pertiwi, Balgis, Yusuf Ari Mashuri

The influence of body image and gender in adolescent obesity

Health Science Journal of Indonesia 2020;11;22-6

Latar Belakang: Body image adalah persepsi penampilan fisik diri sendiri. Mispersepsi berat badan pada remaja dapat menyebabkan rasa ketidakpuasan terhadap tubuh dan obesitas pada remaja. Jenis kelamin juga berperan dalam obesitas remaja dan body image. Remaja yang obes memiliki risiko penyakit tidak menular lebih besar dibandingkan remaja dengan berat badan normal. Maka dari itu, penelitian ini bertujuan untuk melihat pengaruh body image dan jenis kelamin pada obesitas di remaja.

Metode: Desain penelitian ini adalah observasional dengan pendekatan cross sectional. Penelitian ini

dilakukan pada bulan November 2019 di SMK Negeri 9 Surakarta. Jumlah subjek dari penelitian ini sebanyak 57 siswa yang dipilih dengan cara two stage sampling. Body image dan obesitas dinilai melalui kuesioner MBSRQ-AS, Grafik IMT berdasarkan usia dan lingkaran pinggang. Data yang telah terkumpul diolah dengan independent T-test, fisher exact test, uji regresi logistik dengan nilai signifikansi $p < 0,05$.

Hasil: Terdapat perbedaan yang signifikan dalam skor body image antara kelompok obesitas dan non obesitas ($p = 0,006$) dan rata - rata skor laki-laki lebih tinggi dibandingkan perempuan. Selain itu, laki - laki memiliki skor lebih tinggi dalam setiap aspek body image dibandingkan perempuan. Hubungan signifikan juga ditemukan antara body image dan obesitas ($p = 0,045$), dan jenis kelamin dengan obesitas ($p = 0,009$).

Kesimpulan: Ada hubungan yang signifikan antara citra tubuh dan jenis kelamin dengan obesitas pada remaja dan skor citra tubuh berbeda secara signifikan antara kelompok obesitas dan non obesitas dan antara siswa pria dan wanita.

Kata kunci: body image, obesitas, jenis kelamin, remaja

WH 160

Dominikus Raditya Atmaka, Windi Indah Fajar Ningsih, Risnukathulistiwa Maghribi

Dietary intake changes in adolescent girl after iron deficiency anemia diagnosis

Health Science Journal of Indonesia 2020;11;27-31

Latar Belakang: Defisiensi zat besi dapat terjadi karena rendahnya konsumsi makanan yang mengandung tinggi zat besi dan tingginya konsumsi makanan yang dapat menghambat absorpsi zat besi. Meningkatkan asupan zat gizi adalah salah satu cara paling efektif untuk memutus rantai permasalahan anemia defisiensi zat besi. Tujuan penelitian ini untuk mempelajari perubahan asupan gizi dan kesadaran akan kesehatan pada remaja perempuan sebelum dan setelah diagnosis anemia defisiensi besi.

Metode: Penelitian menggunakan desain kohort dengan subyek sebanyak 62 orang dari 2 Sekolah

Menengah Pertama di Wates setelah dilakukan tes hemoglobin (metode cyanmethemoglobin) dan baru didiagnosis anemia defisiensi besi. Asupan energi, zat gizi makro (protein, lemak, karbohidrat), zat gizi mikro (zat besi, vitamin C, tembaga, zink, vitamin B12), faktor penghambat serapan (tanin, oksalat, fitat, serat), juga asupan, buah, sayur, kopi, dan teh diperoleh dengan semi quantitative food frequency questionnaire (SQFFQ), 3 bulan sebelum dan 3 bulan setelah diagnosis anemia defisiensi besi. Data dihitung dengan Nutrisurvey® and STATA 12® menggunakan paired T-test.

Hasil: Tidak ada perubahan signifikan ($p > 0,05$) pada asupan energi, protein, lemak, zink, vitamin B12, tembaga, serat, tanin, dan oksalat. Terdapat peningkatan signifikan asupan karbohidrat ($p = 0,0161$), zat besi ($p = 0,0057$), fitat ($p = 0,000$), dan vitamin C ($p = 0,0017$). Tidak ada perubahan signifikan signifikan rata-rata asupan buah, sayur, dan teh ($p > 0,05$), tetapi konsumsi kopi lebih tinggi ($p = 0,0018$).

Kesimpulan: Diagnosis anemia defisiensi besi mengarahkan pada perubahan asupan zat gizi. Subyek menjadi lebih sadar pada asupan zat gizi setelah diagnosis anemia defisiensi besi. Dibutuhkan usaha lebih untuk merubah asupan buah dan sayur yang rendah dan konsumsi teh dan kopi yang tinggi.
Kata Kunci: perubahan asupan gizi, kebiasaan makan, remaja perempuan, anemia defisiensi zat besi

WC 528

Lucky H. Moehario, Enty Tjoa, Mutiara J. Taslim, Yohanna Angelina

Comparison of BCYE and BMPA media on recovery rate of *Legionella pneumophila*

Health Science Journal of Indonesia 2020;11;32-7

Latar belakang: *Legionella pneumophila* (*L. pneumophila*) telah banyak diketahui sebagai penyebab legionellosis; habitat nya di berbagai sumber air, lingkungan lembab dan hangat. Metode kultur menggunakan media spesifik masih menjadi baku emas untuk identifikasi *L. pneumophila*. Penelitian ini bertujuan membandingkan *recovery rate* *L. pneumophila* ATCC®33823 pada medium spesifik BCYE, dan medium selektif BMPA.

Metode: Dilakukan dilusi serial pada suspensi 0,5 McFarland *L. pneumophila* ATCC®33823; 100 ul dari

tiap tingkat dilusi diinokulasi pada medium *Buffered Charcoal Yeast Extract* (BCYE) dan medium BMPA (medium BCYE yang ditambahkan suplemen BMPA- α), secara duplo. Konsentrasi suspensi dihitung menggunakan metode Angka Lempeng Total (ALT) dari Standar Nasional Indonesia No. 01-2332.3-2006. Persentase *recovery rate* dihitung dan dianalisis secara statistik menggunakan SPSS versi 23,0.

Hasil: Jumlah koloni *L. pneumophila* yang tumbuh pada medium BMPA jauh lebih tinggi daripada yang tumbuh di medium BCYE; konsentrasi tertinggi yang diperoleh adalah pada medium BMPA sebesar $1,45 \times 10^7$ CFU/ml. Persentase *recovery rate* pada medium BMPA adalah 96,67%, dan 60,67% pada medium BCYE.

Kesimpulan: *Recovery rate* medium BMPA untuk pertumbuhan koloni *L. pneumophila* ATCC[®]33823 jauh lebih tinggi daripada media BCYE, karena itu medium BMPA dapat direkomendasikan untuk kultivasi *L. pneumophila*, khususnya pada program surveilans berbagai sumber air dengan biaya lebih terjangkau.

Kata kunci: *Legionella pneumophila*, medium spesifik, BCYE, BMPA, *recovery rate*

WC 200

Herqutanto, Irwan Suhadi, Imron Khazim, Dewi S. Soemarko, Retno A. Werdhani

Correlation of noise level exposure on the reaction time of workers at a manufacturing company in Bandung, Indonesia

Health Science Journal of Indonesia 2020;11;38-44

Latar Belakang: Para pekerja sering kali terpaksa berhadapan dengan kebisingan tinggi ditempat kerja. Kebisingan mengganggu perhatian yang diperlukan terus-menerus dan menurunkan produktivitas kerja, oleh sebab itu pekerja yang melakukan pengamatan dan pengawasan terhadap satu proses produksi atau hasilnya, dapat membuat kesalahan akibat dari terganggunya konsentrasi dan kurang fokusnya perhatian. Pada penelitian ini dilakukan pengukuran waktu reaksi cahaya dan suara untuk menilai fokus perhatian/konsentrasi.

Metode: Studi analitik dengan desain komparatif cross sectional. Penelitian ini dilakukan pada perusahaan manufaktur yang memproduksi benang nylon sintetik. Membandingkan rerata selisih waktu reaksi cahaya dan suara sebelum dan setelah bekerja dengan pajanan kebisingan pada kelompok subjek yang bekerja pada intensitas kebisingan di atas NAB (area braiding) dibandingkan dengan yang di bawah NAB (area waring), dimana sebelumnya dilakukan pengukuran intensitas tingkat kebisingan di kedua area tersebut.

Hasil Penelitian: Perbedaan bermakna waktu reaksi cahaya yang melambat pada subjek yang bekerja dengan pajanan kebisingan di atas NAB sebelum dan setelah bekerja ($p=0.007$), namun tidak dengan waktu reaksi suara. Tidak terdapat perbedaan bermakna waktu reaksi cahaya dan suara pada subjek yang bekerja dengan pajanan kebisingan di bawah NAB sebelum dan setelah bekerja. Terdapat perbedaan bermakna rerata selisih waktu reaksi cahaya yang melambat pada subjek yang bekerja pada pajanan kebisingan di atas NAB dengan di bawah NAB, $p=0,017$, namun tidak bermakna terhadap rerata selisih waktu reaksi suara.

Kesimpulan: Terdapat perbedaan rerata selisih waktu reaksi cahaya pada pekerja yang bekerja dengan pajanan kebisingan di atas NAB dibandingkan dengan pekerja yang bekerja dengan pajanan kebisingan di bawah NAB, sehingga tingkat intensitas kebisingan tinggi (di atas NAB) mempengaruhi waktu reaksi cahaya dan menjadi lebih lambat.

Kata Kunci: waktu reaksi cahaya; waktu reaksi suara; kebisingan

WA 470

Hubullah Fuadzy, Mutiara Widawati, Endang P. Astuti, Heni Prasetyowati, Joni Hendri, Rohmansyah W. Nurindra, Dewi N. Hodijah.

Risk factors associated with Dengue incidence in Bandung, Indonesia: a household based Case-Control Study

Health Science Journal of Indonesia 2020;11;45-51

Latar belakang: Bandung memiliki daerah perkotaan dengan kualitas bangunan rumah yang memadai, namun masih memiliki kasus endemik Demam Berdarah Dengue (DBD) yang tinggi. Penelitian ini

bertujuan untuk mengetahui karakteristik kejadian demam berdarah di tingkat rumah tangga.

Metode: Data dianalisis dari 781 rumah tangga yang terdiri dari 261 kasus dan 522 kontrol. Pemilihan sampel menggunakan metode kasus kontrol berpasangan dengan rasio 1:2. Tahapan penelitian terdiri dari pengamatan status rumah menggunakan form ceklis pemeriksaan dan wawancara menggunakan kuesioner tertutup. Analisis data korelasi pairwise spearman, kemudian regresi logistik biner digunakan untuk prediksi faktor risiko.

Hasil: Faktor risiko usia produktif dan rendahnya tingkat pendidikan kepala keluarga, toilet yang kotor, dan status rumah tidak sehat memiliki pengaruh yang signifikan terhadap peningkatan kasus demam berdarah di Kota Bandung ($p < 0.05$). Faktor determinan adalah usia produktif kepala keluarga (31 - 60 tahun) dimana memiliki kemungkinan 2,53 (95%CI 1.34-4.78; $p < 0.05$) kali lebih besar untuk memiliki anggota rumah tangga yang menderita DBD di Bandung.

Kesimpulan: Usia dan pendidikan kepala rumah tangga, kebersihan toilet dan status rumah sehat memiliki peran penting dalam mempengaruhi kejadian demam berdarah. Dengan demikian, petugas kesehatan perlu melakukan promosi kesehatan mengenai DBD secara intensif kepada kepala rumah tangga.

Kata kunci: Demam Berdarah Dengue (DBD), kepala rumah tangga, usia, sanitasi rumah, Kota Bandung

WH 160

Dwi Rahayu, Dono Indarto

A case-control study related to vitamin and mineral intake in female adolescents with iron deficiency anemia

Health Science Journal of Indonesia 2020;11;52-6

Latar belakang: Anemia defisiensi besi (ADB) merupakan salah satu masalah nutrisi pada remaja putri di seluruh dunia. Penyerapan zat besi di usus halus dipengaruhi oleh adanya vitamin C, kalsium, dan zink pada makanan. Penelitian ini bertujuan untuk mengetahui hubungan pola konsumsi vitamin

A, vitamin C, kalsium dan zink terhadap kejadian ADB pada remaja putri.

Metode: Penelitian ini merupakan penelitian case control yang melibatkan 60 remaja putri dengan ADB dan 58 remaja putri tanpa ADB. Diagnosis ADB berdasarkan kadar Hb dan indeks eritrosit, dan semikuantitatif FFQ digunakan untuk menentukan asupan vitamin dan mineral. Semua data dianalisis menggunakan test chi square dan tes regresi logistik ganda dengan $p < 0.05$.

Hasil: Semua subjek penelitian mempunyai asupan vitamin A dan C harian yang cukup tetapi asupan kalsium dan zinknya tergolong kurang (dalam mg). Namun, mereka semua memiliki frekuensi harian yang berbeda dalam mengkonsumsi mikronutrien tersebut. Remaja putri dengan asupan vitamin A yang jarang (OR=2.67; CI95%=1.10-6.50; $p=0.03$) dan asupan kalsium yang sering (OR=2.27; CI95%=0.85-6.03; $p=0.10$) lebih berisiko terkena ADB dibandingkan dengan remaja putri dengan asupan vitamin A yang sering dan asupan kalsium yang jarang. Akan tetapi hanya asupan vitamin A yang memiliki efek signifikan secara statistik.

Kesimpulan: Hasil penelitian ini menunjukkan bahwa tingginya risiko ADB pada remaja putri berkaitan dengan asupan vitamin A yang jarang.

Kata kunci: anemia defisiensi besi, asupan mikronutrien, remaja putri

WL 356

Irna Megawaty, Elly Lilianty Sjattar, Andi Masyitha Irwan

Evaluation of caregiver intervention on recovery of patient stroke: a systematic review

Health Science Journal of Indonesia 2020;11;57-69

Latar belakang: Stroke merupakan kontributor utama pada kecacatan jangka panjang. Keadaan tersebut dapat menyebabkan kelangsungan hidup stroke bergantung pada caregiver, yang mungkin seorang profesional atau anggota keluarga, sehingga tujuan dari tinjauan literatur ini untuk memberikan informasi terkait hasil dari intervensi yang diperantarai oleh caregiver pada penderita stroke.

Metode: Systematic Review ini disusun dengan melakukan pencarian literature dengan memasukkan

kata kunci yang relevan berdasarkan database PubMed, Proquest, Ebsco, Science Direct, dan Google Scholar, dengan mengikuti panduan PRISMA.

Hasil: Diperoleh 6 artikel yang sesuai dengan kriteria inklusi dan didapatkan hasil bahwa intervensi yang diperantarai caregiver dapat menurunkan tingkat keparahan dan kematian, pemulihan fungsi fisik, perubahan kemampuan fungsi kognitif, kecemasan dan kualitas hidup pada penderita stroke. Selain itu

dapat meningkatkan pengetahuan, keterampilan dan kepuasan caregiver.

Kesimpulan: Perawat dapat memberdayakan caregiver dalam merawat pasien stroke dengan tujuan terjadi peningkatan pemulihan fisik, mental serta menurunkan angka kematian.

Kata Kunci: Caregiver, Intervensi keperawatan, Penderita stroke

Health Science Journal of Indonesia

Volume 11, number 1, June 2020, pages 1-69

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WB 142

Feda Makkiyah, Shelly Nobel, Rahma Hida Nurrizka.

Role of external ventricular drainage in spontaneous intraventricular haemorrhage patients in cileungsi district hospital

Health Science Journal of Indonesia 2020;11;1-8

Background: Intraventricular haemorrhage (IVH) worsen the prognosis of Intracerebral hematoma (ICH). External Ventricular Drain (EVD) is inserted to reduce intracranial pressure that resulted from the progression of IVH. However, EVD is still an optional procedure because it is not always proven effective. This study was aimed to demonstrate prognostic factors of IVH and whether EVD insertion might improve the outcome.

Methods: This cross-sectional retrospective study included IVH patients and concomitant ICH-IVH that required or not EVD in Cileungsi Hospital from January to December 2018. We made comparisons between EVD insertion group and non-EVD group based on sex, age, pulse pressure, Glasgow Coma Scale (GCS), bleeding volume, score of bleeding volume in ventricle lateral, third and fourth based on CT scan, Charlson Comorbid Index (CCI) and modified Rankin Scale (mRS). To determine factors contributing to the good prognosis of EVD, Spearman Correlation test was used with STATA 15 software.

Results: 100 patients were diagnosed with ICH, five patients IVH, 16 patients ICH and IVH. Blood in the fourth ventricle made a significant difference between EVD and non-EVD groups in the concomitant ICH-IVH group ($p=0.035$). GCS score ($p=0.034$) correlated significantly with the prognosis of concomitant ICH-IVH patients that had EVD insertion with correlation coefficient 0.671. EVD

did not improve the outcome in IVH patients nor patients with ICH-IVH.

Conclusion: EVD did not improve the prognosis of spontaneous concomitant ICH-IVH or spontaneous IVH patients, but it still needs to be inserted in case of developing obstructive hydrocephalus that might be lethal.

Keywords: prognosis, IVH, ICH, EVD, Cileungsi Hospital

WS 285

Anggita Bunga Anggraini, Sundari Wirasmi

Treatment patterns of acute respiratory tract infection in children under-fives in Bogor, Indonesia

Health Science Journal of Indonesia 2020;11;9-14

Background: Irrational use of medicines has become a problem in health services, both in developed and developing countries. Treatment of Acute Respiratory Tract Infections (ARTIs) is not only dependent on antibiotics, but only with supportive treatment for cases caused by viruses. This study aimed to determine treatment patterns for children under-fives with ARTIs in hospital in Bogor, Indonesia.

Methods: A cross-sectional study was conducted using medical records of patients under-fives with ARTIs in a government and a private hospital in Bogor in the period of January 1st through December 31st, 2015. Analysis was performed using Chi-square test.

Results: There were 105 medical records collected from both hospitals. The pattern of ARTIs' outpatient

treatments (n= 32) at private hospital were mucolytic (81.3%), decongestants (56.3%), antipyretic (43.8%), and antibiotics (6.3%). Meanwhile, the government hospital (n=8) used antibiotics (75%), antipyretics (50%) and mucolytic (50%). The pattern of ARTIs inpatient treatments in private hospitals (n=27) were antibiotics (85.2%), antipyretic (63%), corticosteroids (33.3%), and mucolytics (25.9%). Otherwise, the government hospital (n=38) used antibiotics (92.1%), antipyretic (89.5%), corticosteroids (31.6%) and mucolytics (71.1%). Factors affected outpatient treatment could not be traced because it lacked of clinical information and laboratory test results. Meanwhile, antibiotic use for inpatients in both hospitals were not related to blood leukocytes level and body temperature.

Conclusion: This study showed that antibiotics prescribing for ARTIs is still not in accordance to the clinical guidelines that must be preceded by various clinical examinations and microbiological. Adherence to clinical guideline is important to prevent antibiotic resistance and to decrease adverse effect.

Keywords: Acute respiratory tract infections, antibiotics, children, treatment

WF 300

Alinea Dwi Elisanti, Dian Yoke Savira, Efri Tri Ardianto

AFB smear positive 1+: a dominant factor in Pulmonary TB household transmission

Health Science Journal of Indonesia 2020;11;15-21

Background: Tuberculosis was a global health problem, including in Indonesia, new cases of pulmonary TB continue to increase. This study examines the dominant factors influence transmission of household contacts in pulmonary TB patients.

Methods: This observational study was a cross-sectional analytic design that used a population of all patients and family members of pulmonary TB patients at the Kedundung Health Center in 2015 until 2016. A sample of 52 people was counted using the infinith sample size formula and taken consecutively. Research variables include prevention behavior,

AFB smear gradation, and household contact transmission. Collecting data were use interview sheets, data collection sheets, sterile sputum pots. Data were analyzed using the chi-square test and binary logistic regression test with a significance level of 0.05.

Results: Prevention behavior ($p=0.093$), AFB smear-positive 2+ ($p=0.377$) did not affect on household contact transmission in pulmonary TB patients, whereas AFB smear-positive 1+ affected household contacts transmission of pulmonary TB patients ($p=0.007$). The value of Exp (B), AFB smear-positive (1+) have a risk of 12.144 times transmitting to household contact when compared to AFB smear-positive (3+). Whereas patients with AFB smear-positive (2+) have a risk of 3,328 times transmitting to household contact when compared with AFB smear-positive 3+.

Conclusion: Pulmonary TB patients with AFB smear-positive (1+) was the dominant factor affecting household contact transmission. Communication and personal hygiene education efforts, the level of adherence in the treatment of pulmonary TB patients needs to be increased to suppress the new incidence of pulmonary TB.

Keywords: Acid- Fast Bacilli (AFB) gradation, pulmonary TB, Prevention Behavior, Transmission of Household Contacts

WS 132

Vita Pertiwi, Balgis, Yusuf Ari Mashuri

The influence of body image and gender in adolescent obesity

Health Science Journal of Indonesia 2020;11;22-6

Background: Body image is a perception of our physical appearance. Weight misperception in adolescent lead to body dissatisfaction and obesity in adolescent. Gender also plays a role in adolescent obesity and body image. Obese adolescents have greater risk of non-communicable diseases than adolescents with normal weight. therefore, this research aims to discover body image and gender influence on adolescent obesity.

Method: This study is an observational design with cross sectional approach. The study was conducted in November 2019 at SMK Negeri 9 Surakarta. The subjects were 57 sophomore that were chosen randomly with simple random sampling. Body image and obesity were measured using MBSRQ-AS questionnaire, BMI for Age Charts and waist circumference. Data was processed by independent T-test, fisher exact test, logistic regression test with significance value $p < 0.05$.

Results : There is a significant difference in body image scores between obese and non obese group ($p = 0.006$) and male students scored higher in every aspect of body image than female students. A significant relationship was found between body image and obesity ($p=0,045$), and gender with obesity ($p = 0.009$).

Conclusion : There is a significant relationship between body image and gender with obesity in adolescents and body image scores differ significantly between obese and non obese group and between male and female students.

Keywords: body image, obesity, gender, adolescents

WH 160

Dominikus Raditya Atmaka, Windi Indah Fajar Ningsih, Risnukathulistiwa Maghribi

Dietary intake changes in adolescent girl after iron deficiency anemia diagnosis

Health Science Journal of Indonesia 2020;11;27-31

Background: Iron deficiency may happens because of low consumption of foods rich in bioavailable iron and high consumption of foods rich in inhibitors of iron absorption. Improving dietary intake is the most effective way to break the chain of iron deficiency anemia problem. This study aimed to study the changes of dietary intake and health awareness among adolescent girl before and after iron deficiency anemia diagnosis.

Method: cohort study with 62 subjects from 2 junior high school in Wates after hemoglobin test (cyanmethemoglobin method) and were newly

iron deficiency anemia diagnosed. Intake of energy, macronutrient (protein, fat, carbohydrate), micronutrient (iron, vitamin C, Cooper, Zinc, vitamin B12), inhibitor factors (tannin, oxalate, phytate, fiber), also intake of fruit, vegetable, coffee, and tea, collected using semi quantitative food frequency questionnaire (SQFFQ), 3 months before and 3 months after iron deficiency anemia diagnosis. Data calculated with Nutrisurvey® and STATA 12® for paired T-test.

Result: No significant changes ($p>0,05$) in energy, protein, fat, zinc, vitamin B12, cooper, fiber, tannin, and oxalate intake. There were significant improvement in intake of carbohydrate ($p=0,0161$), iron ($p=0,0057$), phytate ($p=0,000$), and vitamin C ($p=0,0017$). No significant changes in mean intake of fruit, vegetable, and tea servings ($p>0,05$), but higher consumption of coffee ($p=0,0018$).

Conclusion: Iron deficiency anemia diagnosis resulted to dietary intake changes. Subjects were more aware to their dietary intake after iron deficiency anemia diagnosis. Small fruit and vegetable intake and high tea and coffee consumption suggested that efforts were needed to encourage dietary changes of these foods.

Keywords: dietary changes, eating habit, adolescent girl, iron deficiency anemia

WC 528

Lucky H. Moehario, Enty Tjoa, Mutiara J. Taslim, Yohanna Angelina

Comparison of BCYE and BMPA media on recovery rate of *Legionella pneumophila*

Health Science Journal of Indonesia 2020;11;32-7

Background: *Legionella pneumophila* (*L. pneumophila*) has been known as the etiology of legionellosis; they live in aquatic environment, warm and moist. Culture method using specific medium remains as gold standard in the identification of *L. pneumophila*. This study aimed to compare the recovery rate of *L. pneumophila* ATCC® 33823 on the specific medium BCYE for the cultivation of Legionella, and on BMPA, the selective medium.

Methods: Suspension of *L. pneumophila* ATCC® 33823 of 0.5 McFarland was diluted to 10 fold serial dilution; 100 ul of each dilution was inoculated on Buffered Charcoal Yeast Extract (BCYE) medium, and BMPA (BCYE supplemented with BMPA- α) in duplicate manner. The concentration was calculated using Total Plate Count standard as of Indonesian Nasional Standard number 01-2332.3-2006. The percentage of recovery rate was calculated, and statistical analysis was performed using SPSS version 23.0.

Results: Numbers of colonies of *L. pneumophila* grew on BMPA was much higher than on BCYE medium; the highest concentration was yielded on BMPA medium i.e. 1.45×10^7 CFU/ml. The recovery rates was 96.67% and 60.67% on BMPA medium and BCYE subsequently.

Conclusion: The recovery rate of the BMPA medium on the colony growth of *L. pneumophila* ATCC®33823 was markedly higher than the BCYE, therefore BMPA medium can be suggested to be used in the cultivation of *L. pneumophila* especially in the routine surveillance program for water sources with less cost.

Keywords: *Legionella pneumophila*, specific medium, BCYE, BMPA, recovery rate

WC 200

Herqutanto, Irwan Suhadi, Imron Khazim, Dewi S. Soemarko, Retno A. Werdhani

Correlation of noise level exposure on the reaction time of workers at a manufacturing company in Bandung, Indonesia

Health Science Journal of Indonesia 2020;11;38-44

Background: Workers are often exposed with high noise level at their workplaces. Noise can disrupt the worker's concentration and focus and in the end, may cause lower productivity. Thus, workers whose main job descriptions are to supervise workflow from one phase to another are prone to mistakes due to the loss of concentration and focus. In this research, we used reaction timer with light and sound stimuli to assess attention or concentration.

Methods: The study was an analytical study with comparative cross sectional design, comparing a mean difference between light and sound reaction time before and after work. This research was conducted at a manufacture company that produces synthetic nylon fibers. The subjects were divided into two group; the workers with noise intensity above TLV (braiding's area) and with noise intensity below TLV (waring's area). Prior to the study, the research has measured the intensity of the noise level at the workplace area.

Result: A significant difference was found in the light's reaction time who work with noise exposure above TLV ($p=0.007$) and it was found to be slower after work with the workers who are exposed to noise above TLV. There was also a significant mean difference for the light's reaction time between the above TLV noise group and below TLV noise group ($p=0.017$). There was no significant difference in sound reaction time.

Conclusion: There was a significant mean difference in light reaction time for the workers who work with noise exposure above TLV compare with the workers who work in below TLV, so that a high intensity of noise level is found to affect and decrease the light reaction time of the workers.

Keywords: light's reaction time, sound's reaction time, noise.

WA 470

Hubullah Fuadzy, Mutiara Widawati, Endang P. Astuti, Heni Prasetyowati, Joni Hendri, Rohmansyah W. Nurindra, Dewi N. Hodijah.

Risk factors associated with Dengue incidence in Bandung, Indonesia: a household based Case-Control Study

Health Science Journal of Indonesia 2020;11;45-51

Background: Bandung have urban areas with adequate housebuilding quality, yet still has high Dengue endemic cases. This study aims to investigate the characteristics of dengue incidence at the household level.

Methods: Data analyzed from 781 households consisted of 261 cases and 522 controls. We applied matched case-control samples with a ratio of 1:2 (case: controls). The stages of the research consisted of a house status observation using a form inspection checklist and interviews using a closed-ended questionnaire. The data analyzed by pairwise spearman correlation and binary logistic regression for risk factor prediction.

Results: Risk factors for productive age and low level of education of family heads, dirty toilets, and unhealthy house status have a significant effect on the increase of dengue cases in Bandung ($p < 0.05$). The determinant factor is the productive age of the head of the family (31 - 60 years), it means that the family who has a family head in a productive age is 2.53 (95% CI 1.34-4.78; $p < 0.05$) times more likely to have a household member suffering from DHF in Bandung.

Conclusion: The age and the level of education of the household heads, toilet hygiene, and healthy home status have an essential role in influencing dengue fever. Therefore, health workers need to perform an intensive health promotion regarding DHF to the household heads.

Keywords: Dengue, head of household, ages, house sanitation, Bandung City

WH 160

Dwi Rahayu, Dono Indarto

A case-control study related to vitamin and mineral intake in female adolescents with iron deficiency anemia

Health Science Journal of Indonesia 2020;11;52-6

Background: Iron deficiency anemia (IDA) is a nutritional problem that occurs in female adolescents around the world. Iron absorption in the small intestine is influenced by the presence of vitamin C, calcium, and zinc in ingested foods. This study aimed to investigate the relationship of vitamin A, vitamin C, calcium, and zinc intake with IDA in female adolescents.

Methods: This case-control study was conducted in 60 anemic and 58 normal female adolescents.

IDA diagnosis was determined using Hb levels and erythrocyte indexes and the semiquantitative food frequency questionnaire was used to determine vitamin and mineral intake. All collected data were analyzed using chi-square and multiple logistic regression tests with $p < 0.05$.

Results: All groups had an adequate intake of vitamin A and C but they had inadequate intake of calcium and zinc (in mg). However, they all had different frequency in consuming those micronutrient. Rare intake of vitamin A (OR=2.67; CI95%=1.10-6.50; $p=0.03$) and frequent intake of calcium (OR=2.27; CI95%=0.85-6.03; $p=0.10$) increased IDA, compared with frequent intake of vitamin A and rare intake of calcium but only vitamin A intake had a significant effect.

Conclusion: Our findings suggest that a higher risk of IDA in female adolescents is related to a rare intake of vitamin A.

Keywords: Iron deficiency anemia; micronutrient intake; female adolescents

WL 356

Irna Megawaty, Elly Lilianty Sjattar, Andi Masyitha Irwan

Evaluation of caregiver intervention on recovery of patient stroke: a systematic review

Health Science Journal of Indonesia 2020;11;57-69

Background: Stroke is a major contributor to long-term disability. This situation can lead to stroke survival depending on the caregiver, who may be a professional or family member, so the purpose of this literature review is to provide information regarding the outcome of caregiver-mediated interventions in stroke patients.

Method: The Systematic Review was compiled by searching literature by entering relevant keywords based on the PubMed, Proquest, Ebsco, Science Direct, and Google Scholar databases, following the PRISMA guidelines.

Results: Obtained 6 articles that fit the inclusion criteria and found that caregiver-mediated

interventions can reduce the severity and death, recovery of physical function, changes in cognitive function abilities, anxiety and quality of life in stroke patients. Moreover, it can increase the knowledge, skills and caregiver satisfaction.

Conclusion: Nurses can empower caregivers in caring for stroke patients with the aim of increasing physical, mental recovery and reducing mortality.

Keywords: Caregiver, Nursing interventions, Stroke patients