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# Brunei International Medical Journal (BIMJ) Official Publication of the Ministry of Health, Brunei Darussalam

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## TABLE OF CONTENTS

### ORAL PRESENTATION

1. **ANIMAL BITE MANAGEMENT IN PRIMARY HEALTH CARE CENTERS OF BRUNEI DARUSSALAM** s1
2. **USE OF BLOOD GLUCOSE LOWERING THERAPY IN TYPE 2 DIABETES MELLITUS PATIENTS IN BERAKAS HEALTH CENTRE** s2
3. **REPORTING OF ADVERSE EVENTS IN MUARA HEALTH CENTRE** s2
4. **MANAGEMENT OF ACUTE TONSILLITIS IN PRIMARY HEALTH CARE IN BRUNEI MUARA DISTRICT** s3
5. **COMPLETENESS OF TRIAGE PROCEDURE STEPS AND ACTION PLAN OF PAEDIATRIC PATIENTS ATTENDING FLU CLINIC IN PAPHMWHB HEALTH CENTRE** s4
6. **IMPROVING BLOOD PRESSURE CONTROL AMONG HYPERTENSIVE PATIENTS IN PENGKALAN BATU HEALTH CENTRE** s5
7. **NON-STERIODAL ANTI-INFLAMMATORY DRUG USE IN HYPERTENSIVE AND DIABETIC PATIENTS IN PAPHMWHB HEALTH CENTRE IN 2017** s6
8. **INITIAL SITAGLIPTIN DOSE STARTED FOR DM PATIENTS SEEN IN MUARA HEALTH CENTRE FROM 2013-2017** s6
9. **MANAGEMENT OF ACUTE OTITIS EXTERNA FOR PATIENTS ABOVE 2 YEARS OLD IN JUBLI EMAS BUNUT HEALTH CENER IN 2017** s7

### POSTER PRESENTATION

1. **EARLY DETECTION OF CHRONIC KIDNEY DISEASE IN T2BM PATIENTS IN PAPHRSB HEALTH CENTRE** s8
2. **AUDIT ON EMERGENCY RESUSCITATION TROLLEY AND EMERGENCY DRUGS CHECKLISTS IN JUBLI PERAK SENGKURONG HEALTH CENTRE** s9
3. **USE OF PROXY CLINIC IN BERAKAS HEALTH CENTRE** s9
4. **MANAGEMENT OF PATIENTS WITH DIAGNOSIS OF GOUT AT KUALA BELAIT HEALTH CENTRE** s10
5. **MANAGEMENT OF ACUTE GOUT IN JUBLI PERAK SENGKURONG HEALTH CENTRE** s11
6. **SCREENING AND MANAGEMENT OF CHILDHOOD OBESITY IN TUTONG SCHOOL HEALTH PROGRAM** s12
7. **LOW BACK PAIN AND SCIATICA: ASSESSMENT ON MANAGEMENT IN PRIMARY HEALTH CENTRE, KUALA BELAIT** s13
8. **HAND HYGIENE COMPLIANCE AMONG PENGKALAN BATU HEALTH CENTRE STAFF** s13
9. **AUDIT ON WHETHER CVD RISK ASSESSMENT TOOLS USE IN PRIMARY PREVENTION IN SERIA CLINIC** s14
10. **IMPROVING DOCUMENTATION OF CVD RISK ASSESSMENT AMONG PATIENTS ATTENDING REVIEW FOR NON-COMMUNICABLE DISEASES** s15

## 6TH CLINICAL AUDIT SYMPOSIUM

**ORGANISED BY  
DEPARTMENT OF HEALTH SERVICES  
MINISTRY OF HEALTH, BRUNEI DARUSSALAM**

**21 REJAB 1439H/ 8 APRIL 2018**

### **Oral presentation 1:**

#### **ANIMAL BITE MANAGEMENT IN PRIMARY HEALTH CARE CENTERS OF BRUNEI DARUSSALAM**

Dr Mary Jane Ereso, Pg Dr Noor Azizah Pg Hj Damit, Dr Joseph Castro Ma Anthony Delgado, Dr Avegail Estrella, Dr Dennis Lim Wee Yang

#### **BACKGROUND:**

Animal bites cause morbidity and mortality to humans. Though Brunei Darussalam is free from rabies, there are multiple consultations at primary health care (PHC) clinics for animal bites/contacts. The goal of PHC physician in animal bites patient is to give sufficient prophylactic management according to current guidelines.

#### **AIM:**

To determine if patients with animal bites, specifically—cat or dog bites/contact—consulting PHC clinics are given sufficient prophylactic management against wound and tetanus infections according to current guidelines.

#### **OBJECTIVES:**

- 1) To determine if correct prophylactic antibiotics are prescribed for wound infection based on current recommendations and,
- 2) To ascertain if prophylactic tetanus toxoid is given to patients consulting for cat or dog bites/contacts depending upon the patient's current tetanus immunization status.

#### **CRITERIA AND STANDARDS:**

80% of both objectives achieved.

#### **METHODOLOGY:**

This is a multi-centre retrospective audit. Patients seen in primary care health centers from January 2014 to February 2018 consulting for cat or dog bites/contacts as extracted in Bru-HIMS are included in this audit. Diagnosis was further limited to animal contact mainly for dog and cat bites as indicated by specific ICD 10 code diagnoses. Corresponding patient medical records in Bru-HIMS were reviewed. Data regarding patient's demographics and management of animal bite were collected using a pro forma. Data was subsequently analysed using Microsoft Excel.

#### **RESULTS:**

N=309. Only 63% (n=193) were given Co-amoxiclav and 71% (n=221) received tetanus toxoid immunization. Both results are below the set criterion of optimal care for animal bite/contact management. The audit also showed that among 309 patients, only 9% (n=24) have documented tetanus immunization history.

#### **RECOMMENDATIONS:**

We recommend:

- 1) the standard use of co-amoxiclav as prophylactic antibiotics for local wound infection,
- 2) Improvement on documentations of patient's tetanus vaccination status,
- 3) To include animal bite on Bru-HIMS notification list,
- 4) Stronger liaison between Environmental Health Services, Disease Control Division and PHC in management of animal bites.



### **CONCLUSION:**

This audit shows that patients seen in PHC centers for cat or dog bites/contact are below the optima standard of care.

### **Oral presentation 2:**

#### **USE OF BLOOD GLUCOSE LOWERING THERAPY IN TYPE 2 DIABETES MELLITUS PATIENTS IN BERAKAS HEALTH CENTRE**

Pg Dr Hjh Roserahaini Pg Hj Idros, Dr Mohamed Ismail Hashim, Dr Yazlinda Yaacob

### **BACKGROUND:**

From January-July 2017, only 20.7% of T2DM patients under follow-up in Berakas Health Centre (BHC) achieved target HbA1C  $\leq$  7.0%. Survey done in October 2017 among PHC doctors based in BHC found 92% uses NICE guideline.

### **AIM:**

Aim was to evaluate use of blood glucose lowering therapy in T2DM patients in BHC according to NICE guideline.

### **OBJECTIVES:**

Primary objectives were to determine if all T2DM patients with,

- 1) HbA1C  $\geq$  6.5% on lifestyle interventions were offered metformin or another monotherapy,
- 2) HbA1C  $\geq$  7.5% on monotherapy were considered dual therapy,
- 3) HbA1C  $\geq$  7.5% on dual therapy were considered triple therapy or insulin,
- 4) HbA1C  $\geq$  7.5% on triple therapy were considered insulin.

Secondary objective was to look for possible reasons why T2DM patients were not considered for additional therapy.

### **CRITERIA AND STANDARDS:**

80% of all 4 above objectives achieved.

### **METHODOLOGY:**

Target population was T2DM patients who

attended BHC from July-December 2017. Sample size was 348. Data was collected retrospectively from monthly statistics and Bru-HIMS using a pro forma.

### **RESULTS:**

Standards set were not met. Only 70%, 25%, 17% and 34% met the criteria 1) to 4) respectively.

### **RECOMMENDATIONS:**

Includes (1) To present findings to BHC PHC doctors, (2) Talk on management of DM2 as per NICE guideline, (3) To distribute algorithm (Appendix 1) to all PHC Consultation rooms and shared folder and (4) Re-audit in 2019.

### **CONCLUSION:**

The findings and recommendations following this audit will be very important for BHC towards improving the glycaemic control in T2DM patients under follow-up in BHC.

### **Oral presentation 3:**

#### **REPORTING OF ADVERSE EVENTS IN MUARA HEALTH CENTRE**

Dr Nur Sadrina Hj Marsidi, Dr Norehan Hj Jali, Dr Lai Yuli

### **BACKGROUND:**

Adverse drug reactions (ADRs) are harmful unintended consequences of using medicines which can be prevented. Clinicians have a professional responsibility to report and document ADRs.

### **AIM:**

To assess pharmacovigilance practices amongst general practitioners especially in adverse drug reaction reporting.

### **OBJECTIVES:**

- 1) To find out if adverse events coded in Bru-HIMS in the last 5 years are reported to the National Adverse Drug Reaction Monitoring Centre (NADRM), Ministry of





Health,

- 2) To determine if these adverse reactions are documented in electronic medical records.

#### **CRITERIA:**

- 1) Adverse events are reported to the NADPMC,
- 2) Adverse drug reactions are documented within the adverse drug alert section OR the miscellaneous box (a visible area in the electronic records interface).

#### **STANDARDS:**

Achieved 20% of Criterion 1), i.e. 80% under-reporting of adverse drug reaction, and 60% of Criterion 2.

#### **METHODOLOGY:**

Data was retrospectively collected from patient encounters from 2013 to 2018 with ICD codes T78 (Adverse effects, not elsewhere classified), T78.8 (Other adverse effects, not elsewhere classified), T88.7 (Unspecified adverse effects of drug or medicament) were used to retrieve patient encounters.

#### **RESULTS:**

We identified 32 patient encounters. The rate of under-reporting of ADRs in Muara Health Centre was 97%. Only 37.5% of adverse reactions were recorded in a visible area of the patient chart e.g. adverse reaction section or miscellaneous section.

#### **RECOMMENDATIONS:**

The development of an educational or training program regarding pharmacovigilance may improve reporting of ADRs although further work would be needed to assess the impact of these initiatives.

#### **CONCLUSION:**

This audit provides evidence of significant under reporting and under-documentation of ADRs

#### **Oral presentation 4:**

#### **MANAGEMENT OF ACUTE TONSILLITIS IN PRIMARY HEALTH CARE IN BRUNEI MUARA DISTRICT**

Dr Hjh Nurul Atiqah Hj Zulkifli, Dr Seit Mei Chien, Dr Aziz Ahmed Channar, Dr Mirza Muhammad Omar Saad

#### **BACKGROUND:**

Many patients seek advice from general practitioners for acute tonsillitis, which is usually self-limiting. Precise diagnosis to distinguish bacterial and viral aetiologies is difficult leading to unnecessary antibiotics prescribing. Use of scoring tool, such as Centor score, helps categorise risk of streptococcal infection, resulting in appropriate antibiotics prescribing.

#### **AIM:**

To assess the current practice on acute tonsillitis management in Brunei-Muara District primary care from January to March 2017 and compare it against the NICE guidelines on acute sore throat management.

#### **OBJECTIVES:**

- 1) To ensure that pertinent signs and symptoms of acute tonsillitis were documented,
- 2) To determine the use of Centor score in guiding antibiotics prescribing,
- 3) To evaluate the appropriateness of antibiotics prescribing in patients with Centor score 0-2,
- 4) To evaluate the appropriateness of antibiotics prescribing in patients with Centor score 0-2,
- 5) To evaluate the appropriateness of antibiotics choice,
- 6) To ensure patients were given analgesia.

#### **CRITERIA AND STANDARDS:**

100% standards was set for objectives 1 and 6. 60% standard set for objective 2 and 80% standards were set for objectives 3, 4 and 5.

#### **METHODOLOGY:**

Data was collected retrospectively and ran-



Demised from morbidity database for all six primary health centres in Brunei Muara District, from January to March 2017 with the ICD-10 codes J03, J03.0 and J03.9.

### **RESULTS:**

In total, 337 patients were included. Signs and symptoms of acute tonsillitis were documented: presence or absence of cough (98.5%), body temperature (99.7%), tonsillar findings (97.9%) and cervical lymph nodes findings (16.9%). Only 1 (0.3%) patient had Centor score stated. In patients with Centor score 0-2, only 11% (4.8%) were not given antibiotics. In patients with Centor 3-4, 105 (99.1%) were prescribed antibiotics. Only 2 (0.6%) was given first-line antibiotics and 336 (99.1%) were prescribed analgesia.

### **RECOMMENDATIONS:**

Development of primary care local guideline, including appropriateness of antibiotics prescribing, on acute sore throat management is necessary. It is important to incorporate Centor score in clinical notes templates in BruHIMS. Patient should be educated on self-limiting nature of acute tonsillitis and involvement of social media to emphasise on antibiotics resistance.

### **CONCLUSION:**

Only one standard was achieved in this audit, which calls for a need to improve the management of acute tonsillitis in primary care settings.

### **Oral presentation 5: COMPLETENESS OF TRIAGE PROCEDURE STEPS AND ACTION PLAN ON PAEDIATRIC PATIENTS ATTENDING FLU CLINIC IN PAPHMWHB HEALTH CENTRE**

Dr Hj Norzaidi Hj Md Saini, Dr Siti Nazeedah Hj Mohammed, Dr Mohd Yusri Mohd Yusof, NO Kamsiah Amat, NO Hjh Norhalizawaty Hj Abd Razak, SN Hj Mohd Nooralif Hj Serudin

### **BACKGROUND:**

Primary Health Care's Standard Operating Procedure Triage Guideline was developed in 2014 to be implemented in the triaging process for patients attending health centres under PHC and to standardise the triage process within different health centres. It outlines triage procedure steps and action plan for symptoms for patients presenting to Flu Clinics in PAPHMWHB HC. The procedure steps include taking history of presenting complaint, asking for history of asthma, checking of vital signs and doing appropriate action based on patients' symptoms and presentation.

### **AIM:**

Aim of this audit is to assess the completeness of triage procedure steps and action plan in paediatric patients presenting to Flu Clinic in PAPHMWHB HC.

### **OBJECTIVES:**

- 1) To determine the percentage of adequate presenting complaint done in triage,
- 2) To evaluate the percentage of complete vital signs done in triage,
- 3) To determine percentage of recorded general condition in triage,
- 4) To estimate the percentage of febrile patients receiving appropriate action

### **CRITERIA AND STANDARDS:**

- 1) More than 75% of patients should have adequate presenting complaint done in triage,
- 2) 100% complete vital signs must be done in triage,
- 3) More than 75% of the triage note should have recorded general condition,
- 4) More than 75% of patients with documented fever shall received appropriate action

### **METHODOLOGY:**

A retrospective audit study of randomised 300 paediatric patients' triage notes and clinical notes review, in which data on presenting



complaint, vital signs, clinical conditions and action taken for patients with documented fever were extracted and entered into a designed pro-forma.

#### **RESULTS:**

No general condition were recorded in all 300 paediatric patients' triage note. None of the 47 patients with documented fever received appropriate action during triage. 48.3% have adequate presenting complaints recorded in their triage notes and 98.7% have complete vital signs recorded in their triage notes.

#### **RECOMMENDATIONS:**

Recommendations include raising awareness and accessibility of triage guidelines especially amongst nursing staffs in health centres. It is also recommended to review and update the current guidelines, as well as the current triage template in Bru-HIMS.

**CONCLUSION:** This study highlights that attention and improvement actions are needed in regards to the completeness of triage procedure steps and action plan on paediatric patients presenting to Flu Clinic in PAPHMWHB HC.

#### **Oral presentation 6:**

#### **IMPROVING BLOOD PRESSURE CONTROL AMONG HYPERTENSIVE PATIENTS IN PENGKALAN BATU HEALTH CENTRE**

Dr Hj Norafizan Hj Hazipin, Dr Hj Mahmud Shauqi DSS Prof Dr Hj Mahmud Saedon, Dr Ayesha Omar

#### **BACKGROUND:**

In 2016, an audit conducted in Pengkalan Batu Health Centre (PBHC) showed that only 49% of hypertensive patients achieved target blood pressure (BP). A clinical guideline was then adopted by PBHC doctors to standardize hypertension (HTN) management

#### **AIM:**

To evaluate if using a standardized clinical guideline in the management of HTN has led to an improvement in the overall BP control among hypertensive patients in PBHC.

#### **OBJECTIVES:**

To establish PBHC doctors' compliance with the use of HTN guideline on antihypertensive therapy.

#### **CRITERIA AND STANDARDS:**

Criteria 1 is the proportion of patients achieving target BP based on age and co-morbidities with a standard of 80%. Criteria 2 is the rate of doctors' compliance with the use of HTN guideline on antihypertensive therapy with a standard of 100%.

#### **METHODOLOGY:**

This was a retrospective audit. Data was collected by conducting a retrospective clinical record review on randomly selected hypertensive patients on a monthly basis from September 2016 until December 2017.

#### **RESULTS:**

A total of 904 hypertensive patients' clinical records were randomly selected. Percentage of hypertensive patients achieving target BP has not met the standard set. However, it has increased by 10% from 49% to 59% after the adoption of the HTN Guideline. Doctors' compliance with the use of HTN guideline on antihypertensive therapy almost achieved the standard with 98%.

#### **RECOMMENDATIONS:**

Continue the audit to monitor the trend of the criteria so that high rate of doctors' compliance with the use of HTN guideline on antihypertensive therapy is maintained by necessary intervention.

#### **CONCLUSION:**

To improve further, other aspects of HTN management such as patients' compliance to drug therapy and lifestyle changes and their



knowledge on HTN needs to be explored and addressed accordingly.

#### **Oral Presentation 7:**

### **NON-STEROIDAL ANTI-INFLAMMATORY DRUG USE IN HYPERTENSIVE AND DIABETIC PATIENTS IN PAPHMWHB HEALTH CENTRE IN 2017**

Dr Hjh Yasmin Jamil, Dato Paduka Dr Haji Mehood Alikhan, Dr Aaliyah Sharon Abdullah Wong, Dr Aung Tun Oo, Dr Khine Thant Sin

#### **BACKGROUND:**

People often visit healthcare clinics with musculoskeletal related pain and about 80% of them would be prescribed non-steroidal anti-inflammatory drugs (NSAIDs). The NHS guideline, as well as Medicines and Healthcare Regulatory (MHRA) Drug safety update have advised that all NSAIDs should be prescribed cautiously due to its association with risk of heart failure, thrombotic events, gastrointestinal bleeding and kidney complications in the elderly.

#### **AIM:**

To increase awareness on risk of prescribing NSAIDs in Diabetic and Hypertensive patients in GP setting.

#### **OBJECTIVES:**

The objectives are to analyse the trend of NSAIDs use in diabetic and hypertensive patients particularly in 1) elderly patients  $\geq 65$  years, 2) patients with eGFR  $< 60$ , 3) patients taking ACE-I, ARB and diuretics and 4) patients with underlying ischemic heart disease (IHD) and to overall promote safer prescription of NSAIDs in high risk group in GP setting.

#### **CRITERIA AND STANDARDS:**

0% NSAIDs prescription in 1) elderly more than 65 years, 2) those with eGFR  $< 60$ , 3) underlying IHD and 4) those taking ACE-I/ARB/diuretics.

#### **METHODOLOGY:**

Data was collected retrospectively from Bru-HiMS based on patients encounters in all 12 months in 2017 using ICD-10 codes: hypertension (I10), Type 2 diabetes (E11), gout (M10), pain in joint (M25.5), gonarthrosis (M17), low back pain (M54.5) and myalgia (M79.1).

#### **RESULTS:**

N=202. 26 patients (13%) were age 65 years and above. 16 (8%) of cases were found to have eGFR  $< 60$ . 123 (60%) cases were using ACE-I, ARB or diuretics concomitantly with NSAIDs and 6 cases (2.97%) with underlying IHD were found to be prescribed NSAIDs.

#### **RECOMMENDATIONS:**

Patient's eGFR must first be calculated especially in patients with HTN and DM who are 65 years and above. Non-pharmacological measures as well as other analgesia should be considered when treating common musculoskeletal ailments.

#### **CONCLUSION:**

According to our audit findings, NSAIDs are being prescribed to patients with diabetes and hypertension without taking into account their baseline eGFR.

#### **Oral Presentation 8:**

### **INITIAL SITAGLIPTIN DOSE STARTED FOR DM PATIENTS SEEN IN MUARA HEALTH CENTRE FROM 2013 TO 2017**

Dr Sajjad Khan, Dr Avegail S. Estrella

#### **BACKGROUND:**

The use of oral hypoglycemic agents is one of the cornerstones of management of diabetes mellitus (DM) in primary care. During the recent years, there is a rise in the use of DPP-4 inhibitors such as sitagliptin, in different stages of DM management. Dose adjustments for sitagliptin has been advised by different guidelines as it undergoes extensive renal clear-



ance.

**AIM:**

This audit aims to determine if sitagliptin was started at the appropriate dose in accordance with individual patient's eGFR levels.

**OBJECTIVES:**

The objectives of this audit are 1) to determine if eGFR levels are documented in patient's charts at the time of sitagliptin initiation, 2) to determine if the dose of sitagliptin initially given is appropriate in accordance to the patients' eGFR levels.

**CRITERIA AND STANDARDS:**

80% of patients should have eGFR documented in the records at the time sitagliptin was started; 100% of patients initially given sitagliptin 100mg should have eGFR levels >50ml/min; 100% of patients with eGFR <50ml/min should be started with sitagliptin 50mg.

**METHODOLOGY:**

This is a retrospective audit conducted in Muara Health Centre. Records meeting the inclusion criteria were reviewed. Data collected was done using a pro forma and was subsequently analysed using Microsoft Excel.

**RESULTS:**

A total of 85 patients records were reviewed. 8% (n=7) have documented eGFR levels at the time of sitagliptin initiation (4% (n=3) among patients on sitagliptin 100mg and 27% (n=4) among patients started on sitagliptin 50mg). Among those patients with documented eGFR, 100% (n=3) of patients prescribed with sitagliptin 100mg have eGFR >50mls/min and 100% of patients (n=1) with eGFR <50ml/min are started on sitagliptin 50mg.

**RECOMMENDATIONS:**

Good prescribing habits is as important as being updated on current management practices of common chronic conditions. Factors

that are often overlooked, such as renal function status and dose adjustment recommendations, should be taken into consideration.

**CONCLUSION:**

Two of three criteria in this audit are met. Based on data gathered, there is poor documentation of eGFR at the time of sitagliptin initiation, interestingly, sitagliptin was started at appropriate doses. However, results are based on very limited data, hence, robust generalisation could not be made.

**Oral Presentation 9:**

**MANAGEMENT OF ACUTE OTITIS EXTERNA FOR PATIENTS ABOVE 2 YEARS OLD IN JUBLI EMAS BUNUT HEALTH CENTRE IN 2017**

Dr Hani Arianty Hj Awg Tengah, Dr Ameer Hamza Mohideen Bawa, Dr Eniza Agustri Amir Muhammad

**BACKGROUND:**

Acute Otitis Externa (AOE) is defined as diffuse inflammation of the external ear canal, which may involve the pinna or tympanic membrane. The most common pathogens causing AOE are *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Topical antibacterial agents are beneficial to treat AOE, while oral antibiotics have limited usage. This audit refers to the clinical practice guideline on AOE published by Rosenfeld et al in 2014.

**AIM:**

The aim of this audit is to gauge how patients diagnosed with AOE are being managed, and whether or not the management is in accordance with existing clinical practice guideline.

**OBJECTIVES:**

The objectives of this audit are 1) To determine if patients are being given topical antibiotics as initial treatment of AOE, 2) to determine if patients are not given systemic antibiotics as initial treatment of AOE, 3) To deter-



mine if patients are prescribed painkillers as part of treatment of AOE.

#### **CRITERIA AND STANDARDS:**

At least 80% of patients diagnosed with AOE are prescribed topical antibiotics; at least 80% of patients diagnosed with AOE are NOT prescribed oral antibiotics and at least 80% of patients diagnosed with AOE are prescribed painkillers.

#### **METHODOLOGY:**

This is a retrospective audit on all patients seen in Jubli Emas Bunut HC whom were coded as ICD-10 code H60 "Otitis Externa" and H60.3 "Otitis Externa: other infective" in BruHIMS, in 2017. Data collection was done using a self designed pro forma.

#### **RESULTS:**

82 patients (87.2%) were given topical antibiotics. 70% patients (74.4%) were not given oral antibiotics and 74 patients (78.7%) were prescribed painkillers.

#### **RECOMMENDATIONS:**

Continuing Medical Education lectures, workshops on otoscopy and introducing a local clinical practice guideline would be useful to improve quality of management of AOE.

#### **CONCLUSION:**

This audit showed that most patients diagnosed with AOE were given topical antibiotics as per guideline, though some variation were noted where oral antibiotics were prescribed and painkillers were not adequately prescribed.

#### **Poster Presentation 1:**

#### **EARLY DETECTION OF CHRONIC KIDNEY DISEASE IN T2DM PATIENTS IN PAPHRSB HEALTH CENTRE**

Dr Soe Naing, Dr Dk Siti Norul Ehsan Pg Hj Damit, Dr HJ Munir Faridz DP Hj Metassan, Dr Siti Zakiah Hj Ismail, Dr Faezah DSS Dr Hj Md

Amin

#### **BACKGROUND:**

According to National Kidney Foundation (USA), 10% of world population is affected by Chronic Kidney Disease (CKD). Type 2 Diabetes (T2DM) is one of the major risk factors of developing CKD. Early detection of CKD in diabetic patients is important and it should be done with yearly monitoring of Glomerular Filtration Rate (eGFR) and urine Albumin Creatinine Ratio (uACR).

#### **AIM:**

Aim of the audit is to assess the detection of early stage CKD by doctors of PAPHRSB Health centre (HC) during their routine review of T2DM patients.

#### **OBJECTIVES:**

The objectives are 1) To determine if screening investigations are done to detect early CKD in T2DM patients at PAPHRSB HC, 2) to determine whether uACR is done for detection of early CKD as per NICE guideline.

#### **CRITERIA AND STANDARDS:**

80% of patients should have uACR checked annually.

#### **METHODOLOGY:**

This is a retrospective study of T2DM patients according to above criteria. The patients' BN numbers are extracted and then their records were analysed by 5 doctors whether patients had their urine tests done or not.

#### **RESULTS:**

Out of a total of 259 cases of T2DM analysed, 96 cases (37%) had uACR done. 127 cases (49%) had urine MAU done and 2 cases (1%) has only urine ME done. However 34 cases (13%) had no screening test done for early detection of CKD in the last year.

#### **RECOMMENDATIONS:**

Following this audit, we are organising an in-



ternal CME to advocate and reinforce the use of uACR for early detection of microalbuminuria in T2DM patients.

#### CONCLUSION:

It is clear from our results that our clinic did not meet the audit standard set at 80% for using uACR to detect microalbuminuria.

#### Poster Presentation 2:

##### **AUDIT ON EMERGENCY RESUSCITATION TROLLEY AND EMERGENCY DRUGS CHECKLISTS IN JUBLI PERAK SENGKURONG HEALTH CENTRE**

Dr Nur Fardila Ibrahim, Dr Farah Suhana Hisamonie Koh, Dr Hj Md Firdaus Bin Hj Mat Daud, Dr Joseph Castro Ma Anthony Delgado, Dr Norsilmi Niza Hj Mat Zainin

#### BACKGROUND:

Emergency cases are commonly encountered in the health centre (HC). It is vital that emergency resuscitation trolley, equipment and medication is up to date and regularly checked. We conducted an audit on emergency resuscitation trolley and emergency drug checklist at Jubli Perak Sengkurong HC.

#### AIM:

To evaluate whether the emergency resuscitation trolley and emergency drugs checklists are checked regularly in the HC as per TQM (PHC) clinical Practice Guideline Fifth Edition.

#### OBJECTIVES:

The objectives are 1) To assess whether the defibrillator is checked daily, 2) To assess whether printing by the recorder was done weekly, 3) To assess whether the emergency resuscitation trolley equipment is checked weekly and 4) To assess whether the emergency drugs are checked weekly.

#### CRITERIA AND STANDARDS:

We aim to set a standard of 80% for all of the objectives set.

#### METHODOLOGY:

The emergency resuscitation trolley and emergency drugs checklist logbook from January to December 2017 was included in this audit. Emergency drugs not listed in the guideline were excluded. A retrospective review of the logbooks of the Emergency Resuscitation Trolley and Emergency Drugs Checklists for 2017 was conducted. A standardised proforma was used for data collection.

#### RESULTS:

The standards set for the audit was not achieved although it was nearly reaching the target for objectives 3 (77%) and 4 (79%).

#### RECOMMENDATIONS:

1. To conduct a CME in the HC to familiarize staffs on the updated guideline.
2. To have a delegated nurse to ensure that the emergency trolley and medication is checked regularly as per protocol.
3. To consider checking of the emergency trolley and drugs on a different day.
4. To have a delegated doctor to do periodic checking of the logbook.

#### CONCLUSION:

The standards set for this audit was not met and changes will need to be implemented. We propose for a re-audit in 1 year to evaluate whether the emergency resuscitation trolley and medication is checked as per guideline recommendations.

#### Poster Presentation 3:

##### **USE OF PROXY CLINIC IN BERAKAS HEALTH CENTRE**

Dr Norafizah Hj Serbini, Dr HHj Mohd Elham Hj Mohd Ismail

#### BACKGROUND:

Proxy clinic is a clinic in Brunei Darussalam Healthcare Information and Management System (Bru-HIMS) that can be used to order investigations or prescribe medications in pa-



patient's absence. The Primary Health Care (PHC) management team has made an updated Standard Operating Procedure (SOP) for proxy clinic.

**AIM:**

Aim was to assess the use of proxy clinic in Berakas Health Centre (BHC) in accordance to the PHC Management Proxy Clinic SOP.

**OBJECTIVES:**

There are 6 primary objectives. To determine if 1) patients registered are Yellow or Red IC holders, 2) patients are registered for entering missed investigations, missed prescriptions or for continuing prescriptions, 3) doctors enter notes, 4) prescriptions are only for chronic disease issued in PHC, 5) prescriptions are only for 2-4 weeks and 6) proxy clinic is only used once. The secondary objective is to explore other reasons for using proxy clinic.

**CRITERIA AND STANDARDS:**

The criteria reflected the objectives. Standards expected is 80% for objectives 2 and 3, whereas a standard of 90% is expected for the rest of the criteria.

**METHODOLOGY:**

Data was collected retrospectively from the morbidity database for patient registered under PHC proxy clinic from Bru-HIMS for BHC from January 2017 to December 2017. 200 patients were randomly selected. Data was entered and analysed using Microsoft Excel.

**RESULTS:**

Standards were met for almost all the criteria except for patients who are registered for entering missed investigations, missed prescriptions or for continuing prescriptions which reached only 65%. 35% of patients in this audit was registered for other reasons.

**RECOMMENDATIONS:**

Need to update the SOP to reflect other uses. Information sharing sessions of this SOP will

Need to be held and re-audit in one year time to see if any improvement.

**CONCLUSION:**

Standards were mostly met in this audit except it was found out that there are other reasonable reasons patients were registered into proxy clinic. It is important to update the proxy clinic SOP to take this into account.

**Poster Presentation 4:**

**MANAGEMENT OF PATIENTS WITH DIAGNOSIS OF GOUT AT KUALA BELAIT HEALTH CENTRE**

Dr Sibtain Haider, Dr Sarah Salahuddin, Dr Ghulam Sarwar Dogar

**BACKGROUND:**

Majority of patients with the diagnosis of gout are managed at primary care level. High serum uric acid is well-known risk factor for cardiovascular disease including metabolic syndrome. The management of gout consists of life style modification, management of acute episodes with NSAIDs, colchicine and steroids and offering urate lowering therapy to patients fulfilling certain criteria.

**AIM:**

To assess the management of patients with diagnosis of Gout in Primary Health Care Centre at Kuala Belait Health Centre.

**OBJECTIVES:**

To evaluate whether the management of patients with gout is in accordance with the guidelines set by British Rheumatology society (BRS).

**CRITERIA AND STANDARDS:**

Patients with diagnosis of gout were evaluated according to criteria set by BRS. The Standard set by BRS are that 100% of patients with diagnosis of gout should be advised about diet and life style modification. 90% of patients should be offered urate lowerin therapy if they



Have >1 episode in a year. 90% of patients on urate lowering therapy should have their serum uric acid monitored with titration of dose to achieve target serum uric acid level of <300 mmol/L.

#### **METHODOLOGY:**

Adult patients with the diagnosis of gout seen at Kuala Belait Health Centre in the year 2017 were included in the audit. The data was collected retrospectively using diagnosis code M10 from Bru-HIMS. The records of relevant patients were searched and relevant information were recorded on proforma used for audit.

#### **RESULTS:**

A total of 200 patients were included in audit, of which 24% (n=48) were female and 76% (n=152) were male. Diet and lifestyle advice were documented in 76% (n=153) of the patients. 22.5% (n=45) patients were on allopurinol. Among those who were on allopurinol, 51.1% (n=23) had their serum uric acid checked regularly, however, only 8.8% (n=4) of these patients had their dose adjusted. Uric acid level was checked in 73.5% (n=147) of patients diagnosed with gout. About half of the patients 44% (n=89) had other co-morbidities including Hypertension, Diabetes Mellitus and Dyslipidaemias.

#### **RECOMMENDATIONS:**

All patients with Gout should have documented advice on lifestyle modification. Allopurinol treatment should be offered to patients in accordance with guidelines and dose should be titrated to a target serum urate level of < 300 mmol/L. All patients with diagnosis of gout should be evaluated for other co-morbidities.

#### **CONCLUSION:**

There is a need to improve the management of gout at primary care level.

#### **Poster Presentation 5:**

#### **MANAGEMENT OF ACUTE GOUT IN JUBLI PERAK SENKURONG HEALTH CENTRE**

Dr Hj Tariq Iqbal, Dr Muhammad Afzal

#### **BACKGROUND:**

Acute gout is characterised by the abrupt onset of severe joint pain, swelling and erythema.

#### **AIM:**

The aim is to evaluate whether patients with acute gout arthritis are managed according to current guidelines.

#### **OBJECTIVES:**

The objectives are 1) To determine if non-steroidal anti-inflammatory drugs (NSAIDs), colchicine or corticosteroids are prescribed to patients with acute gout attack, 2) To determine if allopurinol is continued in chronic gout patients during an acute gout attack, if they are already on it, 3) To determine if proper dietary advice is given to patients during an acute gout attack.

#### **CRITERIA AND STANDARDS:**

This audit is based on the Updated European League against Rheumatism Conferences Evidence based Recommendations and British Society of Rheumatology Gout guidelines. 90% of patients should be prescribed NSAIDs (firstline), or colchicine or corticosteroid during the acute phase of gouty arthritis. 90% of patients who are already on allopurinol, should be continued during an acute gout attack. 90% of the patients should be given advice on diet control.

#### **METHODOLOGY:**

Patients' information was extracted from the Bru-HIMS electronic database using the ICD-10 diagnostic code Gout (M10) and Gout Unspecified (M10.9). Patients who were diagnosed with the above codes from January 2017 to December 2017 were selected and data was collected and analysed.

### **RESULTS:**

A total of 95 patients were included in this audit in which 91 were male and 4 were female. 87 patients were given NSAIDs and colchicine. 8 patients were given colchicine alone and 35 with NSAIDs. 86 patients were already on allopurinol, and all of them continued during acute attack. 81 patients (85.3%) were given documented dietary advice.

### **RECOMMENDATIONS:**

Update among our colleagues about the awareness of the guideline in order for appropriate management and patient education.

### **CONCLUSION:**

In conclusion, 2 of our objectives were achieved, suggesting that acute gout management in our clinic has improved substantially. But only the objective of dietary advice failed by 5%.

### **Poster Presentation 6:**

#### **SCREENING AND MANAGEMENT OF CHILDHOOD OBESITY IN TUTONG SCHOOL HEALTH PROGRAM**

Dr Rayavaram Raghunandan, SN Khariyah Hj Md Yussof, AN Umi Sharijah Johari

### **BACKGROUND:**

Childhood obesity has increased at an alarming rate. Overweight and obese children are likely to stay obese into adulthood. According to data collected from National Health and Nutritional Status Survey conducted in 2011, 18% of children aged five to 19 are obese, and a further 33% are overweight.

7256 students were screened in Tutong school health program in the past 3 years and 30% were either overweight or obese.

### **AIM:**

To evaluate screening and management of childhood obesity of school children.

### **CRITERIA AND STANDARDS:**

2 criteria chosen for screening and 3 for management of childhood obesity.

1. All children seen in schools BMI measured and recorded.
2. BMI plotted on WHO growth chart.
3. If overweight/obese: Management plan discussed with parent/guardian.
4. Appropriate referral was done for overweight/obese/morbid obese cases.
5. Monitor progress and review in 3 to 6 months.

Standards for all criteria set as 100%.

### **METHODOLOGY:**

Retrospective data from school health department was evaluated manually with the help of staff nurse and community nurse in the department for the period January-February 2018.

### **RESULTS:**

Out of 100 students, 63 were male and 37 were female. 35% of male students were overweight or obese. 26% female students were overweight or obese. 100% standard was reached for the first 2 screening criteria. However, standard was not met for the appropriate management of overweight and obese school children where 0% of children were managed according to the 3 criteria set.

### **RECOMMENDATIONS:**

1. Recommend to formulate guidelines and a prompt plan of action about management of childhood obesity.
2. Recommend to have special trained staff and clinics dealing exclusively with childhood obesity.

### **CONCLUSION:**

Key findings were screening procedures are well established and reaching standards in the system. Management of overweight and obesity in school children need to be improved.



### **Poster Presentation 7:**

#### **LOW BACK PAIN AND SCIATICA: ASSESSMENT ON MANAGEMENT IN PRIMARY HEALTH CENTRE, KUALA BELAIT**

Dr Ali Anjum

#### **BACKGROUND:**

It is estimated that up to 84% of adults have low back pain (LBP) at some time in their lives. For many individuals, episodes of back pain are self-limiting. Patients who continue to have back pain beyond the acute period (four weeks) have subacute back pain (lasting between 4 and 12 weeks) and may go on to develop chronic back pain (persist for  $\geq 12$  weeks).

#### **AIM:**

The aim of the audit was to evaluate the management and care of LBP and sciatica in patients in OPD Kuala Belait > 16 years of age adults against the recommendations in the updated NICE guidelines published in BMJ January 2017.

#### **CRITERIA AND STANDARDS:**

1. Patient screened with STarT back score, standards set 100%.
2. X-ray advised immediately, standard set 10%.
3. Patient education leaflet given, standard set 100%.
4. Paracetamol with or without orphenadrine prescribed, standard set 60%
5. Non-steroidal anti-inflammatory medications prescribed, standard set 40%.
6. Patient referred to physiotherapy, standard set 50%.
7. Patient referred to specialist care when indicated, standard set 10%.

#### **METHODOLOGY:**

A pro forma was used to assess patients with the ICD-10 codes M54.5 and M54.4, who attended in KB Health centre in the last 1 month. Data was recorded in Microsoft Excel for analyses.

#### **RESULTS:**

From the patients which were included in the audit, only 3 (6.25%) patients were referred to SSBH Orthopaedic Surgery which met the audit standards. None of the patients were assessed by Risk Score tool. X-ray was advised to more patients (15%) than selected standards (10%). Leaflets were offered to 6 patients (12.5%) which does not meet audit criteria standard (100%). Among medications paracetamol and Norgesic were given to 57% (n=27) which meet audit standards of 60%, but NSAIDs were offered to 56% which was 16% more than set standards. 21 (44%) patients were referred to physiotherapy which was slightly below the set standards of 50%.

#### **RECOMMENDATIONS:**

Physicians should use risk assessment tool for assessing patients with LBP and sciatica. Leaflets on LBP guide should be placed in all consultation rooms with written record evidence in management plan of HC notes. Lumbar spine x-rays are not advisable for LBP. NSAIDs use should be discouraged especially in elderly patients. Patients must be referred to physiotherapy to avoid their frequent visits for recurrent LBP.

#### **CONCLUSION:**

Treatment of LBP and sciatica is below standards in KB OPD.

### **Poster Presentation 8:**

#### **HAND HYGIENE COMPLIANCE AMONG PENGKALAN BATU HEALTH CENTRE STAFF**

Dr Hj Mohd Sharimie Hj Sahari, Dr Teo Moi Moi, SN Nur Adilin Zarifi, SN Sarimah Hj Sahat, SN Siti Nurilah Mentaris, ramiah Sakikala Sathiamoorthie

#### **BACKGROUND:**

Hand hygiene is a simple yet effective practice in reducing healthcare associated infections. This can result in a subsequent reduction in

the morbidity and mortality rates. On average, healthcare providers do not wash their hands on a regular basis such that they only clean their hands less than half of the times they should. In September 2016, a clinical audit was conducted on hand hygiene compliance among PBHC staffs.

**AIM:**

To evaluate the hand hygiene compliance among PBHC staffs over the course of 1 year period (from September 2016 to August 2017).

**OBJECTIVES:**

To determine the compliance rate of hand hygiene among PBHC Staffs.

**CRITERIA AND STANDARDS:**

Compliance rate of hand hygiene among PBHC staffs should be above 70%.

**METHODOLOGY:**

An observational study was conducted from month of September 2016 to August 2017 to assess the hand hygiene compliance among PBHC Staffs. Each month, the nursing staffs collected a total of N=120 findings for the 5 moments of hand hygiene. Inclusion criteria were Doctors, Nurses, Pharmacists and Phlebotomists and Medical records officers. Exclusion criteria was cleaners.

**RESULTS AND DISCUSSIONS:**

The target for hand hygiene compliance was not achieved. The overall median for hand hygiene compliance in a one year period was 65.8%. In terms of the breakdown of the data among staffs, doctors and phlebotomists managed to achieved a median of 73% for overall hand hygiene compliance. This was followed by nurses with the median of 68%. Pharmacists managed to achieve a median of 53% while MRO managed to achieve a median of 42%.

**RECOMMENDATIONS:**

Improvements may need to be implemented especially in terms of data collection and manpower. Attitude towards the importance of hand hygiene among staffs need to be initiated as early as possible (especially for new staffs). This can be done by giving training on hand hygiene. Retraining and reminder are needed so that staffs are aware about hand hygiene.

**Poster Presentation 9:**

**AUDIT ON WHETHER CVD RISK ASSESSMENT TOOLS USE IN PRIMARY PREVENTION IN SERIA CLINIC**

Dr Aung Kyaw Myo

**BACKGROUND:**

For the primary prevention of cardiovascular disease in primary care, NICE clinical guidelines and American Heart Association guidelines recommended the use of a systematic strategy to identify people who are likely to be at high risk, using risk assessment tools e.g. Q risk calculator or the Framingham risk score.

**AIM:**

To evaluate if CV risk calculations are used in Seria Clinic.

**CRITERIA:**

The criterion is the use of cardiovascular risk calculator during a follow-up clinic visit.

**STANDARDS:**

50% of follow-up clinic visits for diabetes, hypertension and dyslipidemia have documented the use of a CV risk calculation.

**METHODOLOGY:**

Patients are sampled from the Chronic Diseases Registry in the clinic. The inclusion criteria are patients between 40-84 years of age with any of the following conditions: Diabetes, hypertension and hyperlipidemia. Patients must have been followed up at least twice



From Jan 2016 to Dec 2017. The exclusion criteria are patients who have visited the clinic less than twice in the time period above, patients who refused laboratory testing, Type 1 diabetes, patients with eGFR less than 60ml/min<sup>1.732m<sup>2</sup></sup> or albuminuria, patients with pre-existing cardiovascular disease, patients with familial hypercholesterolemia, patients who are 85 years or older.

#### **RESULTS:**

N=85, the results showed only 7% of patients encounters used a CV risk calculator.

#### **RECOMMENDATIONS:**

To encourage the use of cardiovascular risk calculating tools in primary prevention of cardiovascular diseases. This can be achieved by having continuous medical education regarding the importance of using CV risk calculators. Alternatively, CV risk calculation may be done by the triage nurses.

#### **CONCLUSION:**

The low use of CV risk calculators may result in less effective decision making in management of primary prevention of cardiovascular disease.

#### **Poster Presentation 10:**

#### **IMPROVING DOCUMENTATION OF CVD RISK ASSESSMENT AMONG PATIENTS ATTENDING REVIEW FOR NON-COMMUNICABLE DISEASES**

Dr Muhd Najib Adib Hj Mohd Naibi, Dr Shareen Foo Shih Thing, Dr Siti Edah Fateema Hj Abdullah, Dr Irene Nor Liew, Dr Chong Jia Xin

#### **BACKGROUND:**

Cardiovascular (CVD) events as these are shown to be the top causes of mortality in Brunei Darussalam. Hence comprehensive CVD risk assessment is an important aspect of our management in the prevention of CVD related events.

#### **AIM:**

To improve CVD risk assessment and management among patients in Brunei-Muara health centres as per Brunei Hyperlipidemia Guideline 2016.

#### **OBJECTIVES:**

The primary objective of this audit is to determine if CVD risk assessment is done regularly during annual CDC reviews. The secondary objectives include determining if WHO risk score is used for CVD risk assessment. If patient is on recommended statin therapy and if other CVD risk factors being documented.

#### **CRITERIA AND STANDARDS:**

The objectives measured in this audit includes whether CVD risk assessment was done during patients' CDC review, with a standard of 70% and secondly if the WHO risk tool used to measure the CVD risk with a standard of 100%.

#### **METHODOLOGY:**


Retrospective study of patients attending 5 health centres in Brunei-Muara clinic. Data was collected from Bru-HIMS, where a search was done using ICD-10 code ICD10 Z09.8 "Follow-up examination after other treatment for other condition" within a period of 6 months (14th September 2017 to 14 March 2018).

#### **RESULTS:**

A total of 400 patients are included in this audit. Only 6.25% patients had their CVD risks recorded. 38.5% of the patients were on statin therapy but 57.3% of patients who are on atorvastatin are on a dose below 20mg. Only 42.5% had smoking status and 15.75% had family history recorded.

#### **RECOMMENDATIONS:**

Recommendations includes the use of the same CVD risk tool, ongoing education and training and having standardised proforma which can help with documentation of CVD

 [Back to Table of contents](#)

Risk factors.

**CONCLUSION:**

There is insufficient CVD risk assessment and its documentation being done for patients attending annual review of their non-communicable diseases.

