
THE IMPACT OF THE 2022 INFLUENZA OUTBREAK ON ASTHMA ADMISSIONS AT THE VILA CENTRAL HOSPITAL IN 2022

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INTRODUCTION

- The influenza virus is a highly transmissible virus responsible for global pandemics
- Influenza virus is well-recognized trigger of severe bronchial asthma exacerbations resulting in increased morbidity and sometimes mortality
- Until 2022, Vanuatu has not had a recent flu outbreak of overwhelming proportions and clinical services have been able to cope relatively well with the stable number of asthma admissions



INTRODUCTION

- During the influenza outbreak in May-August 2022 there has been an increase in asthma admissions to the hospital
- To determine the impact of the 2022 influenza outbreak on the number and severity of asthma admissions in the VCH medical ward and to assess its burden on clinical services



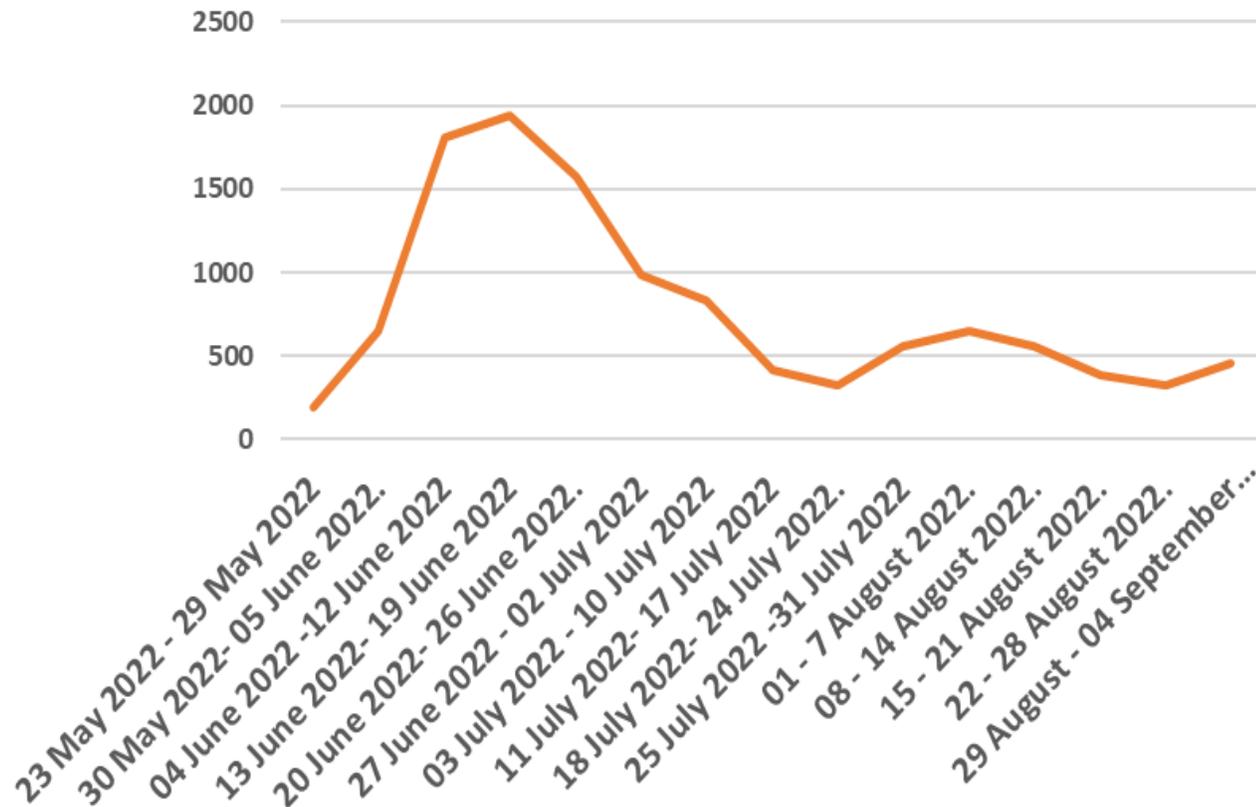
METHODOLOGY

- Retrospective observational study
- Data from admission registers , patient records and the MOH surveillance unit statistics
- Sample size: asthmatics admitted from January –August 2022, total of 99patients
 - Gender: Male-51 patients, Female-48patients (n=99)
 - Age
 - Patients presenting complaints
 - Severity (mild, moderate, severe or critical) of the illness
 - The number of drugs they used during their admission
 - Length of stay



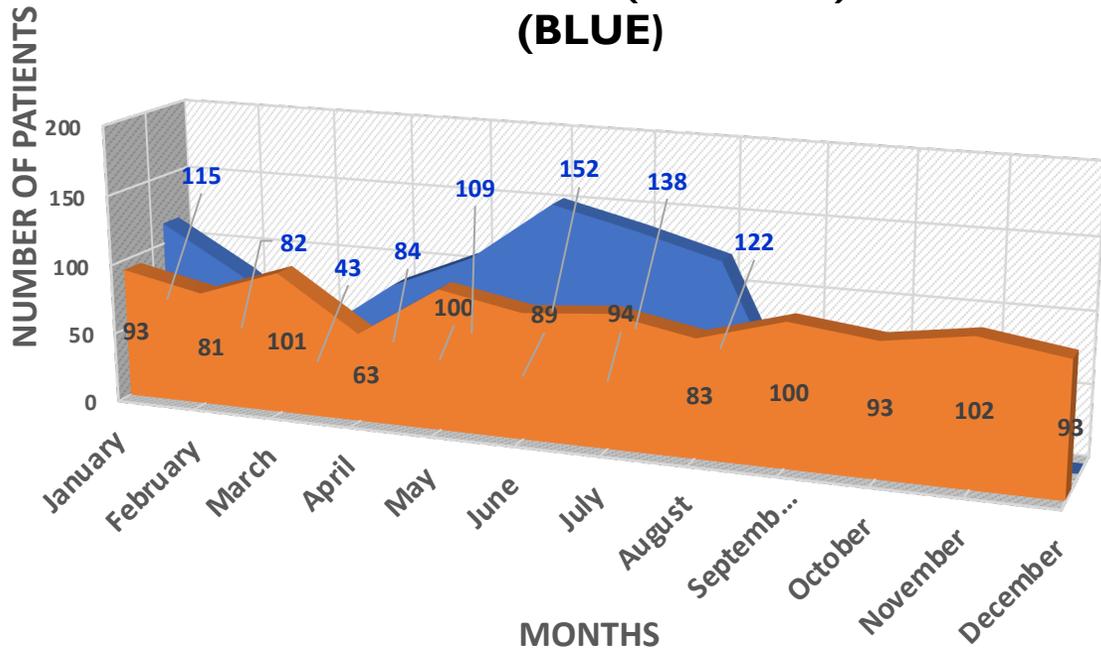
RESULTS- INFLUENZAS LIKE ILLNESS (ILI) IN VANUATU 2022

Reported ILI cases in Vanuatu 2022

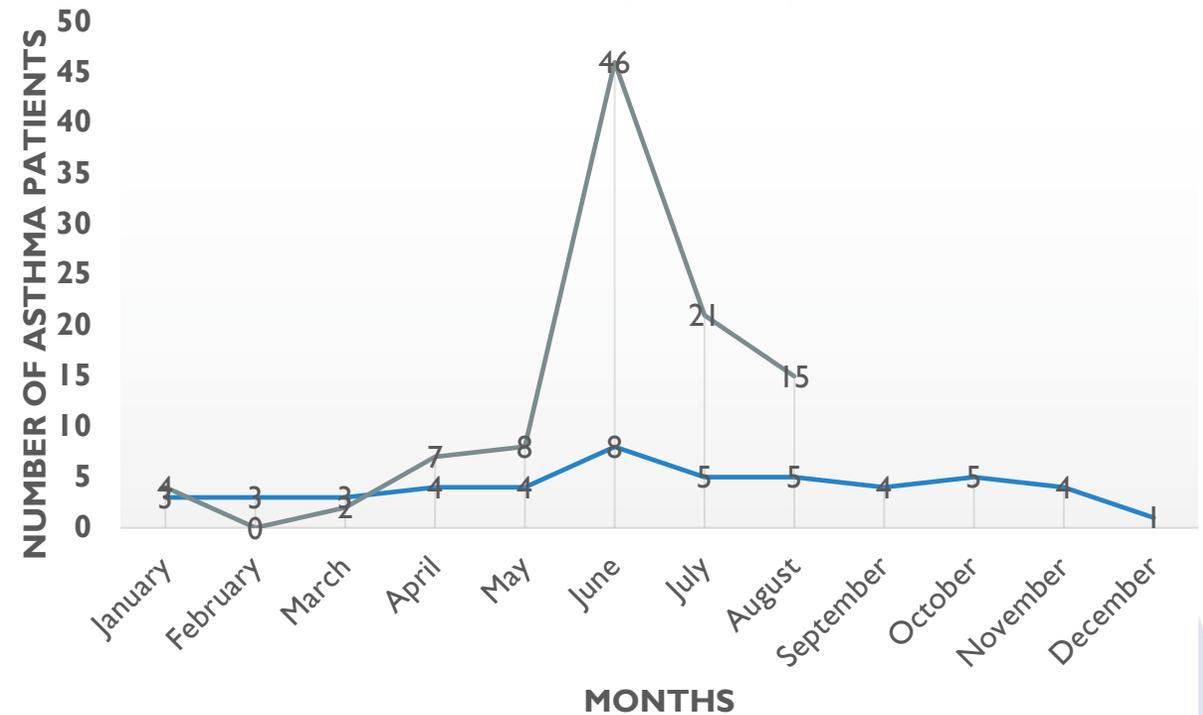


RESULTS- MEDICAL WARD, VILA CENTRAL HOSPITAL

TOTAL MONTHLY ADMISSIONS IN MEDICAL WARD 2021 (ORANGE) VS 2022 (BLUE)

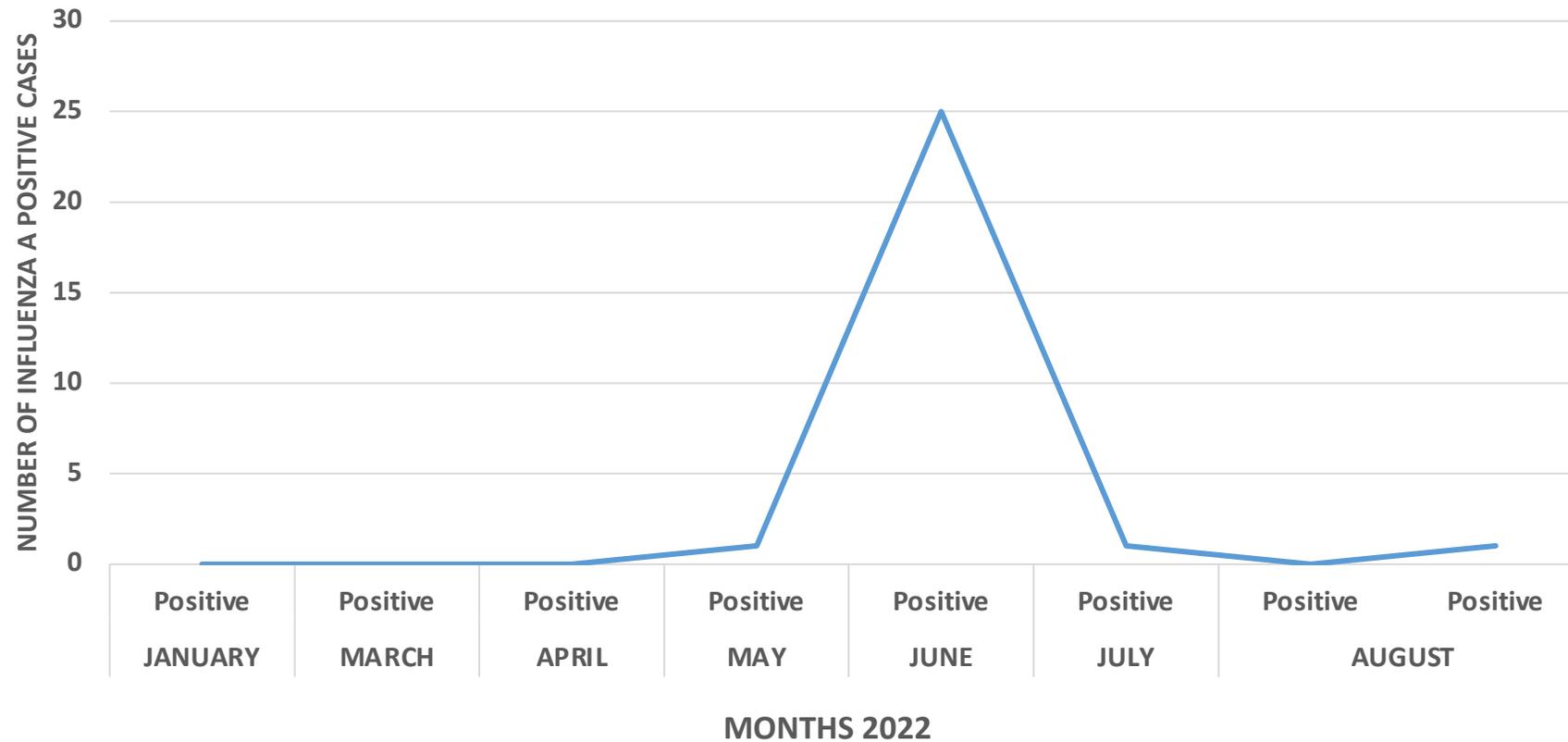


ASTHMA ADMISSIONS IN 2021 (BLUE) AND 2022 (BLACK)

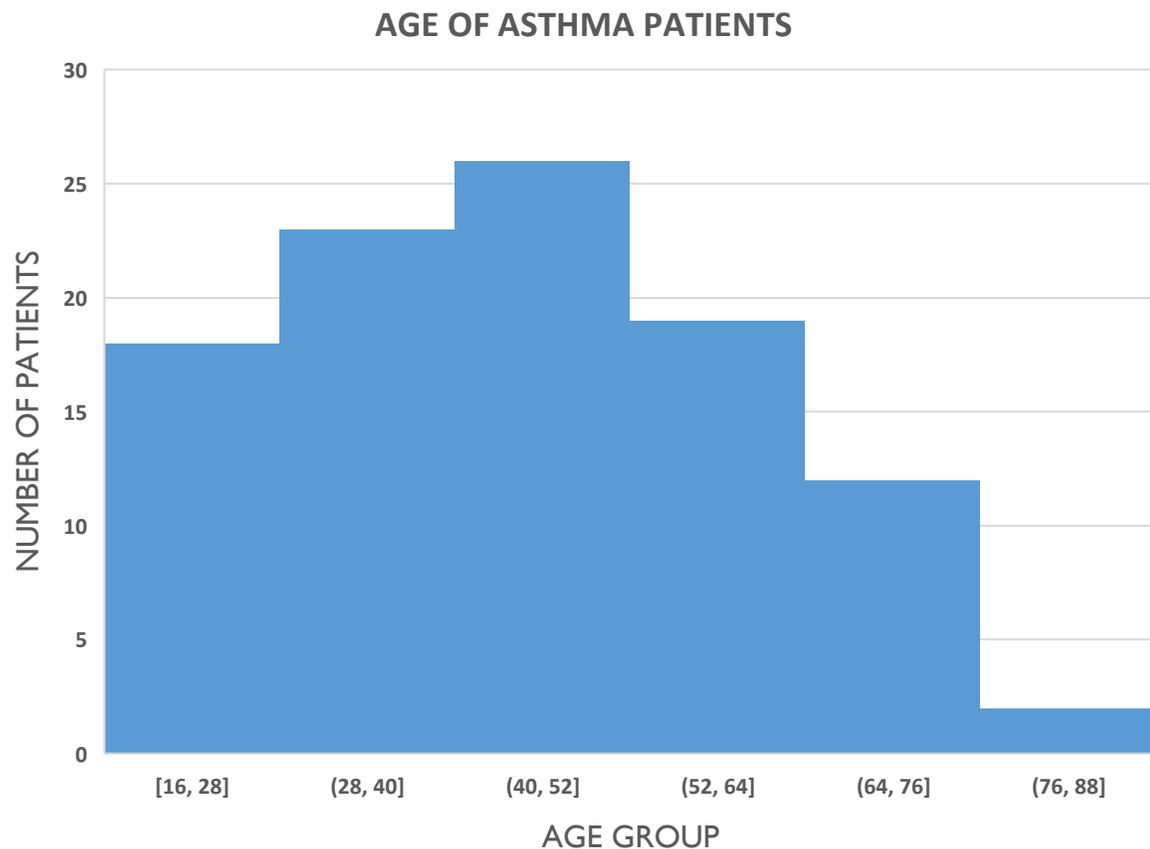


RESULTS-INFLUENZA A CASES ADMITTED WITH ASTHMA

INFLUENZA A CASES ADMITTED WITH ASTHMA



RESULTS-AGE OF ASTHMA PATIENTS



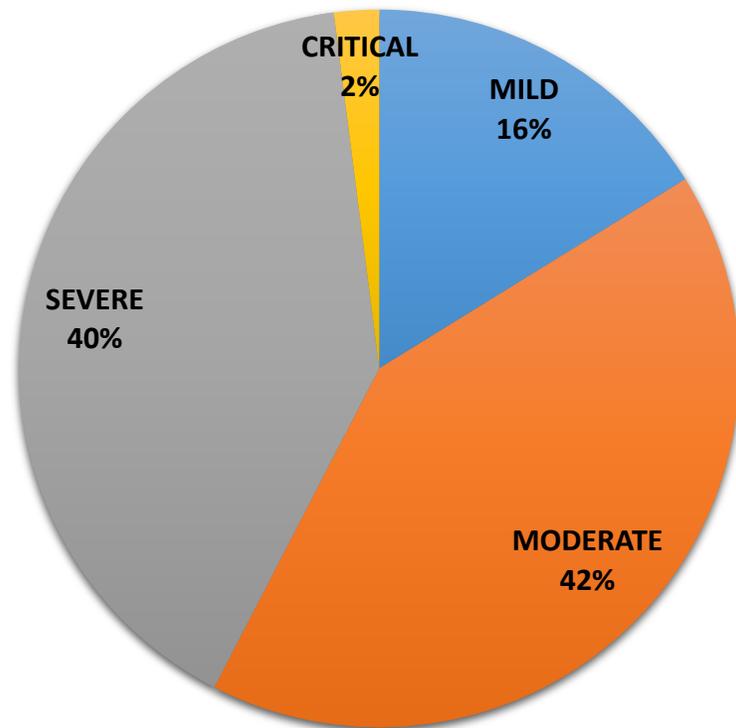
- 40-52years-27 patients
- 28-40years-23 patients
- 52-64years- 18 patients
- 16-28years – 17 patients
- 64-76years – 12 patients
- 76-88- 2 patients

(n=99)



RESULTS-SEVERITY OF ASTHMA CASES

SEVERITY OF ASTHMA



■ MILD ■ MODERATE ■ SEVERE ■ CRITICAL

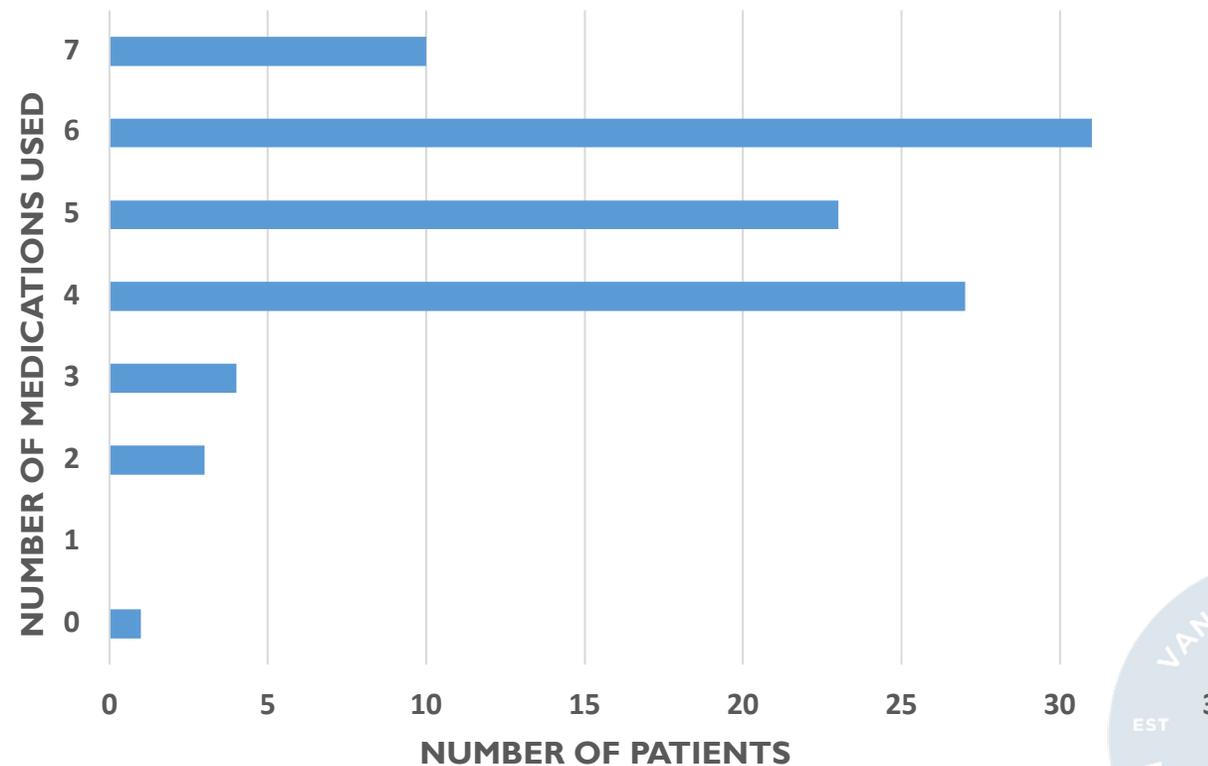
- Mild cases-16%
- Moderate cases-42%
- Severe cases-40%
- Critical cases-2%, in ICU

(n=99)

RESULTS-NUMBER OF ASTHMA MEDICATIONS USED PER PATIENT

- i. SALBUTAMOL-administered through a nebulizer machine
- ii. **IPRATROPIUM BROMIDE**
- iii. HYDROCORTISONE
- iv. PREDNISOLONE
- v. MAGNESIUM SULPHATE (MgSO₄)
- vi. AMINOPHYLINE
- vii. ADRENALINE

NUMBER OF ASTHMA MEDICATIONS USED PER PATIENT



RESULTS

- During Influenza A outbreak in May-August 2022, there was a 200% increase in Asthma admissions in Medical ward, Vila Central Hospital
- Age (28years-52years)
- Common presenting complaints: cough, chest tightness and shortness of breath
- Most patients admitted:
 - with Moderate and Severe cases
 - need 4-6 asthmatic medications (Ipratropium bromide was out of stock most of June)
- Average length of stay is 4.79days



DISCUSSION

- The unprecedented rise in the number of asthma admissions in mid-2022 coincided with the influenza outbreak. It stretched our hospital capacity and exposed huge gaps in our clinical services.
- In depth knowledge of local flu epidemiology and patterns are key to ensuring appropriate and timely public health awareness and messaging and optimizing hospital preparedness plans.



RECOMMENDATIONS / IMPLICATIONS

- Patients & families:
 - teach them (ward and SOPD) on taking ownership during asthma crisis-use of spacer etc
 - to have an emergency plan-Paramedical, transportation, phone numbers etc
- Pharmacy:
 - Emergency drugs MUST readily be available-Inventory and actions
 - Pharmacist to do daily rounds to see use of drugs



RECOMMENDATIONS / IMPLICATIONS

- Laboratory
 - test kits should always be available (influenza etc)
- Each department to have an Electronic Data registry
- National:
 - Influenza vaccine for vulnerable population with chronic respiratory issues
 - More public health awareness on Influenza



CONCLUSION

- Influenza is a trigger of severe bronchial asthma exacerbations resulting in increased morbidity and sometimes mortality
- The more severe their asthma, the more medications they will require



ACKNOWLEDGEMENTS

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- Filing clerks, VCH statistics
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- National Library of Medicine, *Effectiveness of Influenza Vaccines in Asthma: A Systematic Review and Meta-Analysis (systemic review)*

