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Submitting author: Dr Mak Kin Yan

Post title: Resident Specialist, AHNH, NTEC

Continuous Quality Improvement Project on Influenza Management in a Paediatric Department

Mak KY, Tsui KW, Tong LCT

Department of Paediatrics and adolescent medicine, Alice Ho Miu Ling Nethersole Hospital

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Introduction

Influenza epidemics has become a big burden on the Hongkong public medical system and is attracting a lot of public attention in the recent decade. Seasonal outbreaks lead to overcrowded emergency departments, and fully packed medical and paediatric wards, which further increase cross-infection risks. Currently, we are performing nasopharyngeal aspirate (NPA) for all patients presented with influenza-like illness (ILI), and prescribing oseltamivir (Tamiflu) to those with confirmed influenza, or empirically to high risk cases.

Objectives

We aimed to describe data on admission number, influenza caseload, seasonal trend and medication use in our department, in order to evaluate the effect of our current influenza management and to find ways to improve workflow and meet public demand.

Methodology

All admissions to paediatric wards of Alice Ho Miu Ling Nethersole Hospital (AHNH) with NPA performed, within the period 1 Aug 2016 to 31 Jul 2017, were reviewed through CDARS. We collected data including sex, age, month of admission, NPA result, length of stay (LOS), co-infection, Tamiflu and antibiotic use. The data were analysed using SPSS 16.0.

Result

We retrieved totally 5696 patient records with NPA performed. 939 (16%) patients got NPA positive for influenza, among which 887 (94%) were flu A and 52 (6%) were flu B. 26% of the influenza cases were below two. 14.5% of flu patients suffered from co-infection by other respiratory viruses, including respiratory syncytial virus (RSV), adenovirus, parainfluenza virus and rhinovirus. Tamiflu was prescribed in 39% of flu cases VS 0.5% in non-flu cases. Among patients prescribed Tamiflu, 93% were

positive for influenza. Less antibiotic prescription was observed in confirmed flu cases (20% VS 37%). Influenza positive patients had shorter LOS, while those prescribed Tamiflu got longer LOS. Influenza surge was only observed in summer months, in contrary to the bimodal winter and summer surges in adult patients in the same period.

Timely availability of NPA results were helpful in facilitating early discharge of patients, and helped to avoid unnecessary antibiotic use. Tamiflu did not shorten LOS, which is contradictory to literature finding. This may be due to presentation beyond 48 hours of disease, more severe illness, or delayed prescription of Tamiflu while waiting for the NPA result. We propose that a change in our current practice, to give empirical Tamiflu to both high risk and non-high risk children during seasonal surge, may help to shorten LOS thus reduce access block at emergency department. Further multi-centre prospective studies should be conducted to obtain more data.