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Management of Cold Chain during In-Patient Drug Delivery

Yau KM(1), Tam SKY(1), Yick PK(1)
(1)Department of Pharmacy, Ruttonjee & Tang Shiu Kin Hospitals

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Introduction

Cold chain management has received increasing attention, and is often regarded as one of the performance indicators of pharmaceutical services. In addition, cold chain breach is associated with concerns regarding safety and potential loss of product efficacy. Nevertheless, no prior evaluation of cold chain maintenance during in-patient drug delivery has been conducted. This is a descriptive, cross-sectional investigation to appraise in-patient drug delivery on the subject of cold chain management.

Objectives

This study aims to evaluate cold chain maintenance during in-patient drug delivery. The investigation also aims to collect baseline data to allow future studies. By putting forward recommendations, this serves as a component of the Continuous Quality Improvement (CQI) process for pharmacy services.

Methodology

The temperatures of outgoing refrigerated items upon departure from pharmacy and arrival at wards were recorded. Certain unused refrigerated items were returned from wards to pharmacy. Their respective temperatures upon departure from wards and arrival at pharmacy were also recorded.

Result

46 refrigerated items were recorded throughout the week of investigation. Of which, 44 items were delivered to wards, and 2 were ward-return items. Items included anidulafungin (n=4), eye drops (n=3), fludrocortisone tablets (n=4), human immunoglobulin (n=5), synthetic proteins/peptides (n=25), and vaccine (n=3). Cold chains regarding all aforementioned items remained intact with temperature within the range of 2 to 8°C.

The temperature recorded demonstrated that cold chain management protocols in place have been compliant with in order to effectively maintain cold chains of refrigerated items. Further actions are suggested to preserve the good standard and further fortify existing cold chain management. For example, compliance to “Guidelines on Cold Chain Management of Refrigerated Medicines” by Hospital Authority Head Office could be periodically reinforced. Future studies, which could

involve a larger sample size, might be conducted to regularly assure quality of drug delivery.