



Effective Drug Management: Mitigation Strategies to Combat Critical Drugs' Shortages

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Introduction

The healthcare industry is inundated with daily news of drug shortages, which can adversely affect drug therapy and compromise medical procedures.

Aims

Recommend alternative

therapies

Propose management strategies to prevent future drug shortages

Identify critical drugs in the hospital formulary

Methodology



Critical drugs in the hospital formulary identified based on two criteria:

- ILIFE-SAVING
- DETRIMENTAL TO HEALTH if

missed for a single dose or day



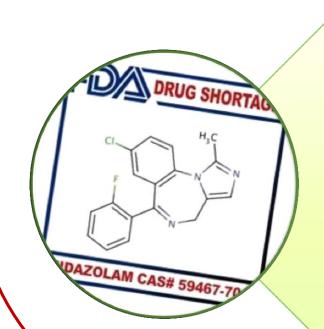
Expert opinions of clinical pharmacists were sought to ensure drugs critical in our specialized setting were accounted for



Literature review by Drug Information Services (DIS) to identify suitable therapeutic alternatives



Factors such as cost, ease of availability of the alternative suggested and opinions of clinical pharmacists and key physicians were taken into consideration



Key management strategies adopted from guidelines by international healthcare authorities e.g. United States Food and Drug Administration (US FDA)

Results



CRITICAL DRUGS IDENTIFIED!

Out of the 99 drugs identified, 40 were evaluated for suitable alternatives (examples as below):

DRUG	INDICATION	PROPOSED ALTERNATIVE(S)
Acetylcysteine Injection	Antidote for paracetamol poisoning	Methionine oral powder
Caffeine Citrate Injection	Treatment of apnea of prematurity	Aminophylline Injection
Diazepam Enema	Acute management of seizures	Midazolam (Buccal) [Note: Not registered in Singapore and expensive, increase par levels of Diazepam Enema]
Factor IX [Profilnine® SD] Injection	Treatment of warfarin overdose, together with fresh frozen plasma and	Factor VII [NovoSeven®] Injection

Increase par levels of critical drugs with no suitable alternatives

alternatives
[Implemented for 7 drugs to ensure

buffer stocks available]

KEY

Vitamin K injection

MANAGEMENT STRATEGIES

Reserve use of critical drugs for vulnerable patients

Effective communication strategy in place to alert healthcare professionals on drug shortages and alternatives e.g. memorandums

Early identification of global

drug shortages through FDA

websites and communication

with manufacturers

Thus far, there have been no out-of-stock situations for these/critical drugs after this initiative

Discussion

The alternatives were summarized into a table for quick reference.

The key management strategies proposed above are important in ensuring sufficient time to secure alternatives and disseminating information to the hospital. As it is impractical to increase par levels of all drugs, only those without alternatives were affected during the review to prevent obsolescence and wastage.

Conclusion

Given the profound impact that drug shortages have on patients' clinical outcomes and safety, establishing clear strategies is pertinent in tempering the effects of unavailability of critical drugs.

ACKNOWLEDGEMENT

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Reference(s):

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