

GPI SPD50140: A HOSPITAL MEDICATION EXCHANGE SYSTEM – AN INVESTIGATION OF WASTE AND ECONOMIC IMPACT

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What was done?

A medication exchange system at a Danish hospital was evaluated according to avoidance of medication waste and potential economic impact.



How was it done?

For two weeks in February 2024, pharmaconomists registered all medications that were exchanged between six hospital wards representing 147 of 302 hospital beds. The quantity of the excess medications when returned was registered and the amount of pharmaceutical waste was calculated. This was compared to the amount of waste incurred by ordering a whole package for the ward. Moreover, the economic cost was calculated based on the value per package and compared to the economic costs of purchasing whole packages.

What next?

The economic evaluation may be replicated for comparable medication exchange systems at other hospitals, and thus, generate evidence for the economic and environmental impact of the system.

Why was it done?

Exchanging medication stocks between hospital wards is a common method for reducing pharmaceutical waste at hospitals. However, the impact of such systems is unclear. Therefore, we aimed to calculate the annual economic cost savings after the establishment of the medication exchange system at the University Hospital of Southern Denmark in Aabenraa.

Sygehus Sønderjylland		Afdeling <i>Fra Pulje</i>			
Patient navn, cpr.nr:					
<i>Kun ét præparat pr. kuvert.</i>					
Dato	Præparat navn og styrke	Antal morgen	Antal Middag	Antal Aften	Antal Nat
	<i>Synjarby 12,5mg / 100mg</i>				
Pakkedato: <i>26.01.2024</i>		Initialer: <i>SLT</i>			
Indholdet må kun anvendes i højst 1 uge efter pakkedato					
119520					

What has been achieved?

In total, 244 exchanges were registered. The pharmaceutical waste was estimated to 13-26%.

The Department of Pulmonary Diseases, followed by the Department of Gastrointestinal Diseases, caused the greatest waste.

The exchanged medicine had an economic cost of 3,566 DKK (478 euro).

In comparison, the cost of purchasing whole packages was estimated to 21,042 DKK (2,822 euro). Thus, the total cost saving was $((21,042 - 3,566 \text{ DKK}) \times (52/2 \text{ weeks})) = 454,376 \text{ DKK}$ (60,935 euro), corresponding to $((454,376/147) \times 302) = 933,480 \text{ DKK}$ (125,146 euro) for the entire hospital.

The results led to establishment of a physical medication room to store the excess medication available for other clinical wards. All medications are registered electronically to support optimal use of excess medication throughout the hospital.

Conflict of interest

We have no potential conflict of interest to disclose.

