

ASSESSMENT ON KNOWLEDGE, ATTITUDE AND PRACTICE OF Dispensing and storage trends of biologics and vaccines in outpatient pharmacy settings.



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BACKGROUND

Cold chain management entails keeping medications like insulin, vaccines, oxytocins, etc. between 2-8°C temperatures. The temperature outside this range leads to reduce potency and efficacy of the drug. End-of-chain drug sellers should be knowledgeable about cold chain storage and dispensing.

AIM/OBJECTIVES

- The main aim of study is to find out knowledge of respondents about storage condition, dispensing of biologics and vaccines in different community pharmacies.
- To verify monitoring systems in community pharmacies to ensure product quality.

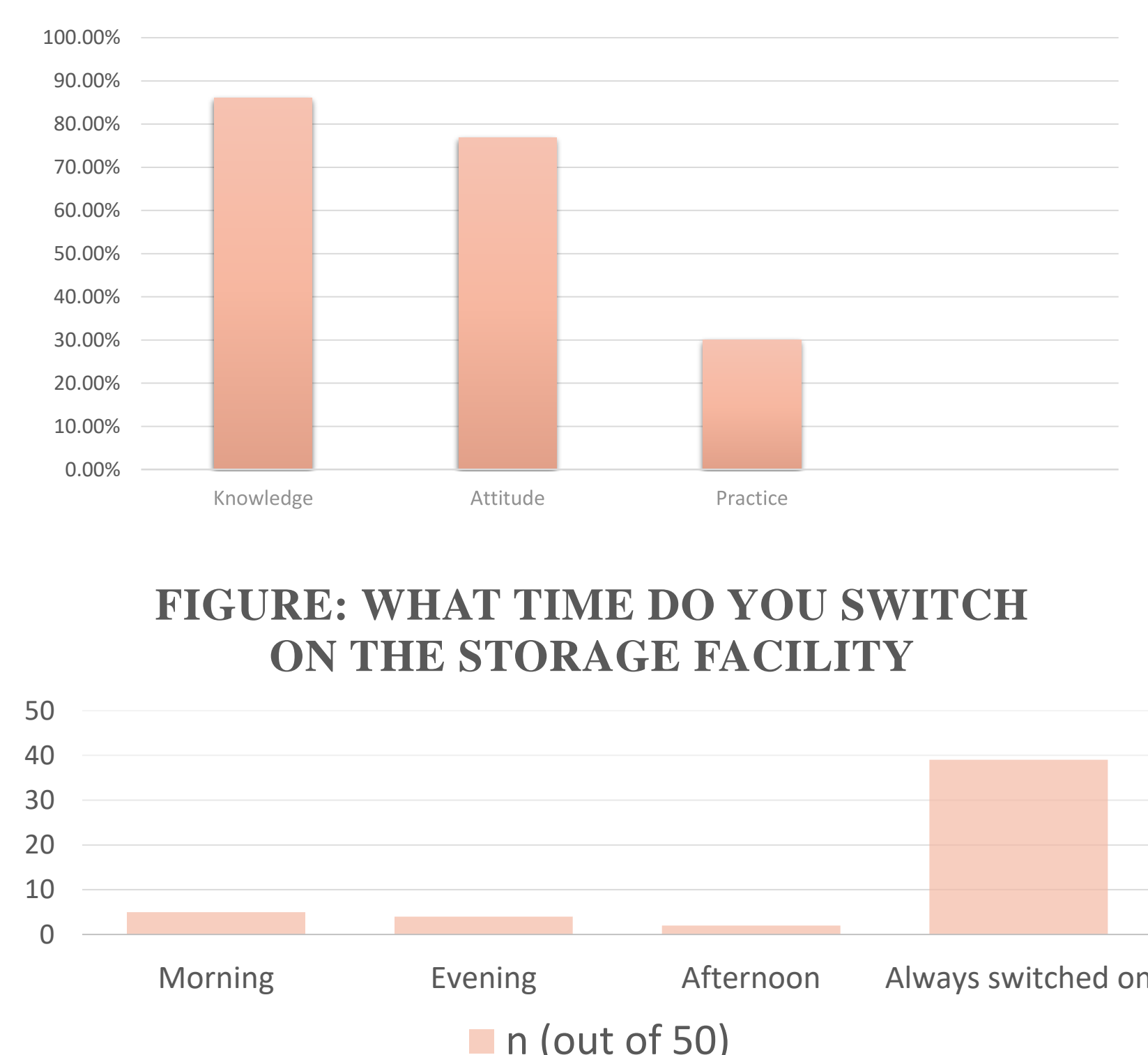
DESIGN/METHODS

A survey, visual observation, and contact with respondents were all part of cross-sectional research. The questionnaire was the major data collection instrument for the survey. A total of 50 ISB/RWP respondents were chosen using a purposive convenient sample approach. We have used dichotomous scales and semantic differential scales, open ended scale, paired comparison scale and frequency scale in our survey based questionnaire. The results of the SPSS version 19 analysis were presented as descriptive statistics in a frequency distribution, pie charts and bar graphs.

Demographic Characteristics of Participants	
Mean Age	33.69 ± 1.70
Male	n=43; 86%
Female	n=7; 14%
Pharmacy	n=43; 86%
Medical Store	n=6; 14%

RESULTS

The majority of responders had an adequate understanding of cold chain product storage and dispensing conditions, but they lacked a positive attitude and proper practice. Almost 26.77% of pharmacies did not calibrate their temperature monitoring equipment, and over 70% were unaware of where their instruments were being calibrated or the legitimacy of their calibrated devices. 19.23% of outpatient pharmacies responded yes when asked about storing other food items in their storage facility along with cold chain products.



Knowledge		
Receiving and transportation of cold chain medicine		
Ice Chest	Distributor Van	Do Not Know
56%	22%	22%
Storage facility		
Type of cold chain medicine stored		
Vaccines	Ointments	Injections
54%	26%	20%
Insulin		
Where do we stock insulin		
Shelf	Fridge	Freezer
6%	80%	14%
Vaccine		
Temperature of refrigerator is 2-8°C		
Yes	No	
92.30%	7.70%	
Vaccines spoil on exposure to light		
Yes	No	
73.07%	26.92%	

Results Understanding of respondents about cold chain medicine Out of 50 outpatient pharmacy settings in twin cities i.e. (RWP/ISB)

Attitude	
Temperature Monitoring	
Do you check temp while receiving	
Yes	No
100%	0%
Storage facility	
Storage facility use	
Refrigerator	Fridge
60%	40%
Are products physically segregated	
Yes	No
84%	16%
Low high temperature alarms are use	
Yes	No
70%	30%
Thermometer calibrated	
Yes	No
74%	26%
Institution for thermometer calibration	
PME Pvt LTD	Donot know
30%	70%
Store food and drinks in refrigerator	
Yes	No
19.23%	80.77%

Results Attitude of respondents about cold chain medicine Out of 50 outpatient pharmacy settings in twin cities i.e. (RWP/ISB)

A vaccine inventory log is maintained that document.

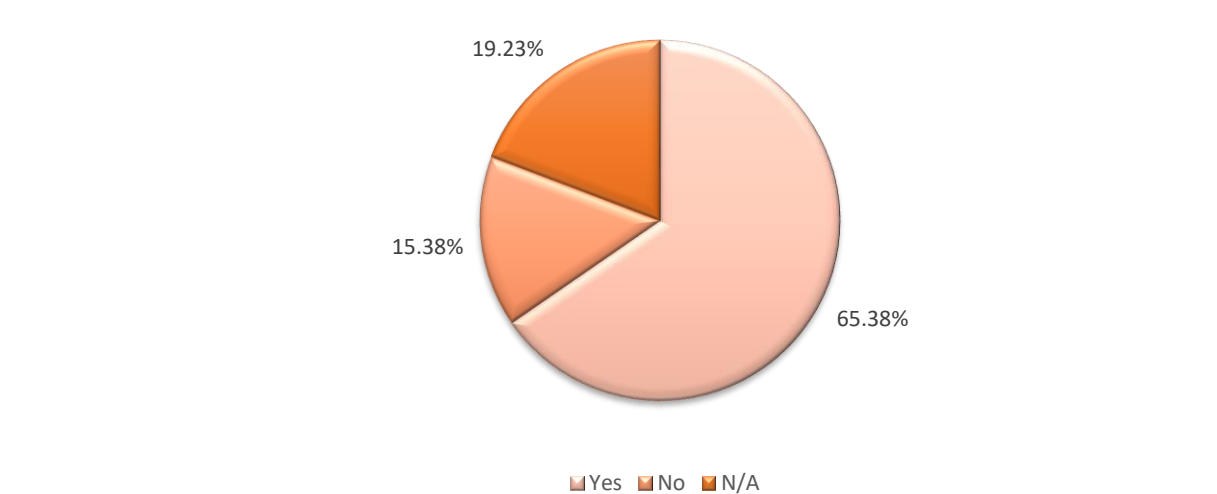


Figure: Who dispense insulin to patient?

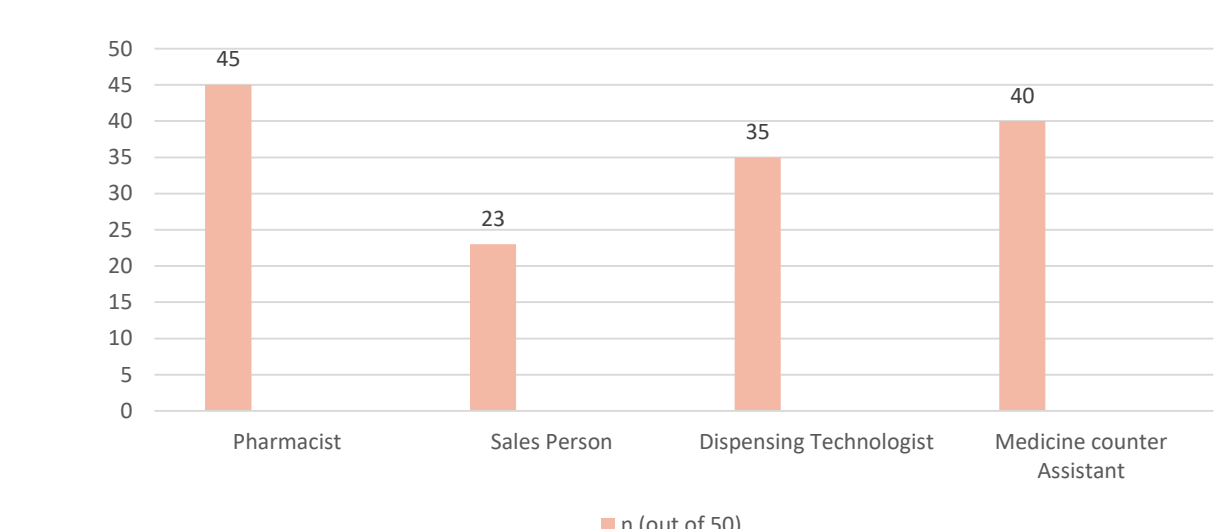
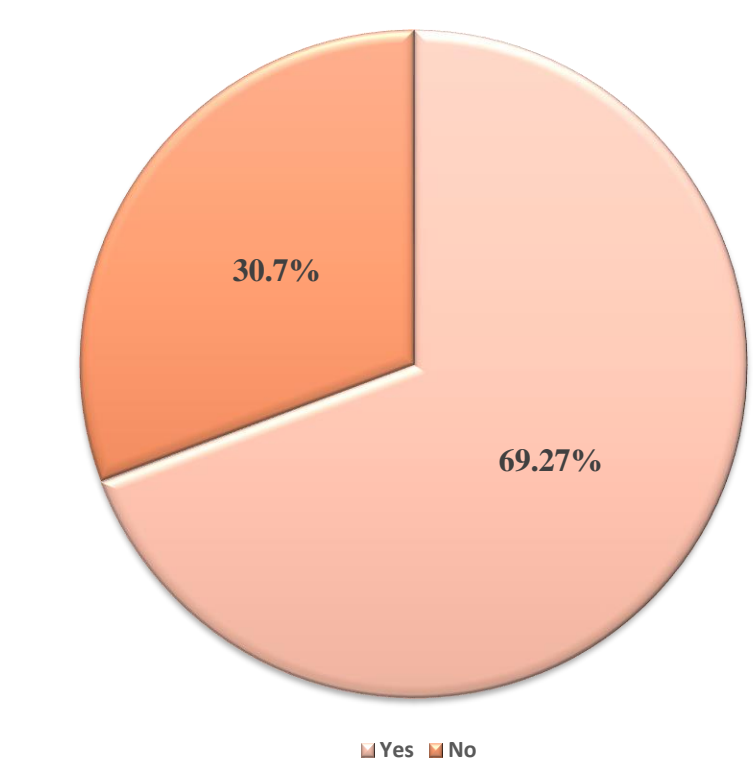


Figure: Is the storage device furnished with low/high temperature alarms



CONCLUSIONS

This study demonstrates the need for reform and improvement in cold chain storage and dispensing standards. It is necessary to increase the quality of experts' adherence to suitable methods and their attitudes, which will undoubtedly result in fewer side effects and more cost-effective outcomes.

On the basis of present study, it is suggested to train the staff and prepare a national guideline for the storage and handling of biologics and forcefully implement the laws to adopt the particular guideline. The continuing education programs are the most effective way to minimize the errors and educate about the proper storage and handling of biologics.

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