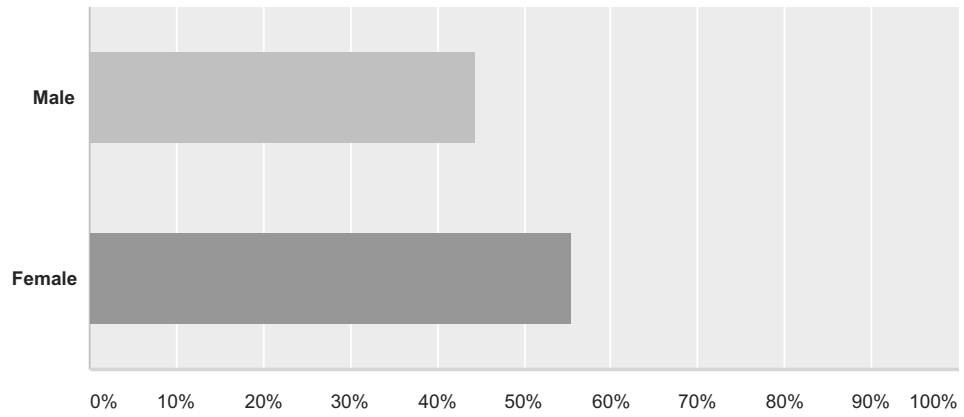


### Q1 Gender

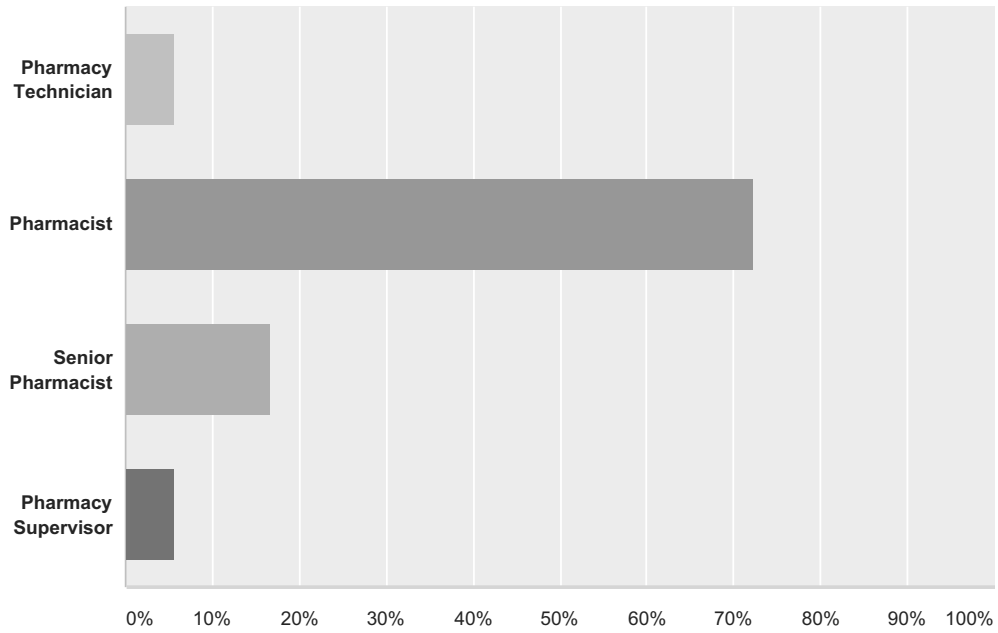
Answered: 18 Skipped: 0



Answer Choices	Responses
Male	44.44% 8
Female	55.56% 10
<b>Total</b>	<b>18</b>

### Q2 Job Title

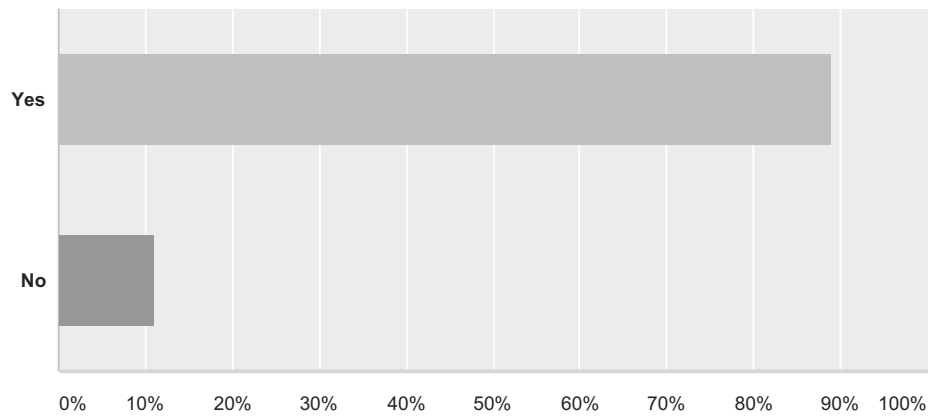
Answered: 18 Skipped: 0



Answer Choices	Responses
Pharmacy Technician	5.56% 1
Pharmacist	72.22% 13
Senior Pharmacist	16.67% 3
Pharmacy Supervisor	5.56% 1
<b>Total</b>	<b>18</b>

### Q3 Do you know what is Master Drug Index?

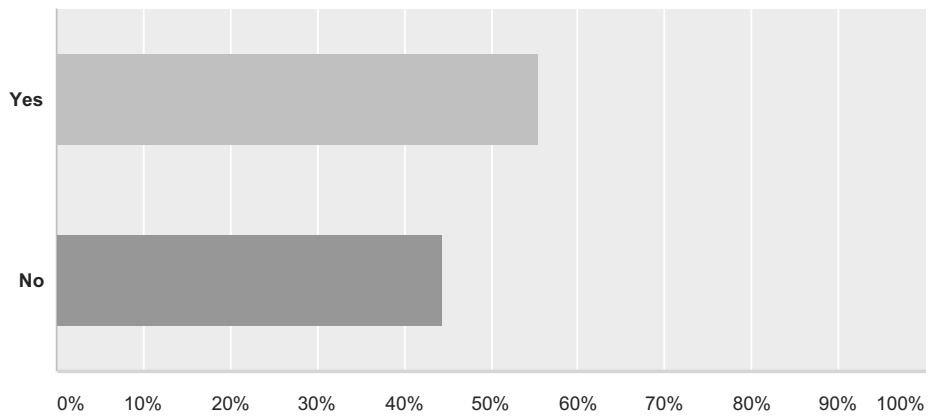
Answered: 18 Skipped: 0



Answer Choices	Responses
Yes	88.89% 16
No	11.11% 2
<b>Total</b>	<b>18</b>

### Q4 Did you ever suggest using Master Drug Index for any physician ?

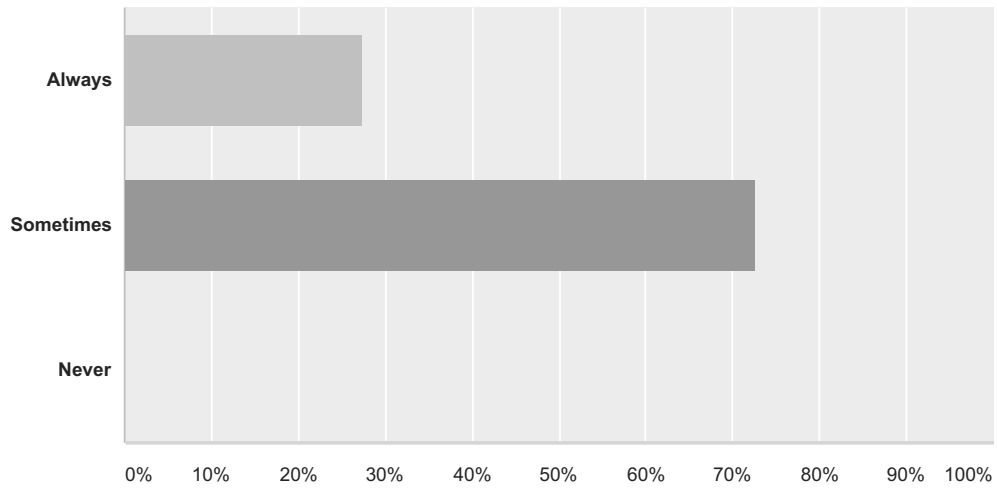
Answered: 18 Skipped: 0



Answer Choices	Responses	
Yes	55.56%	10
No	44.44%	8
<b>Total</b>		<b>18</b>

**Q5 If your answer to question number 4 is yes How often do you suggest its use in case of a related prescribing error?**

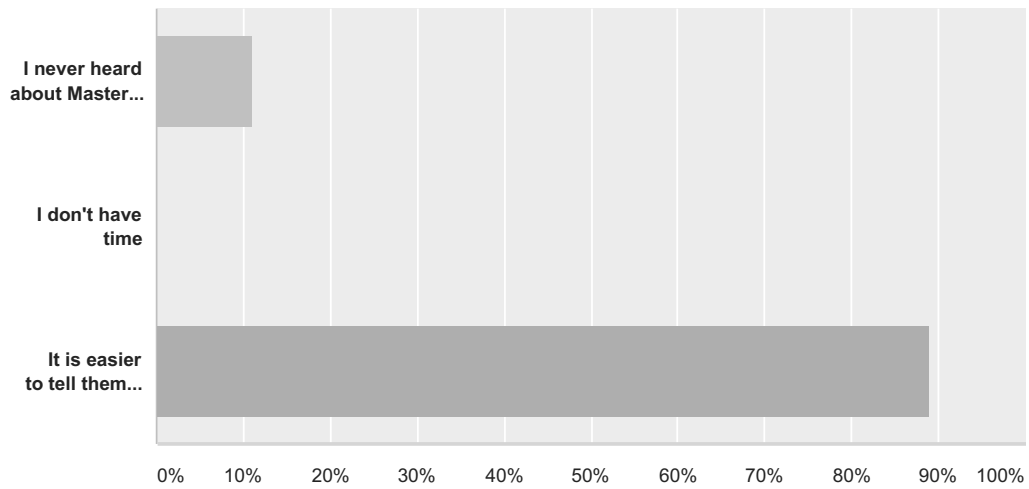
Answered: 11 Skipped: 7



Answer Choices	Responses
Always	27.27% 3
Sometimes	72.73% 8
Never	0.00% 0
<b>Total</b>	<b>11</b>

### Q6 If your answer to question 4 is No the reason is:

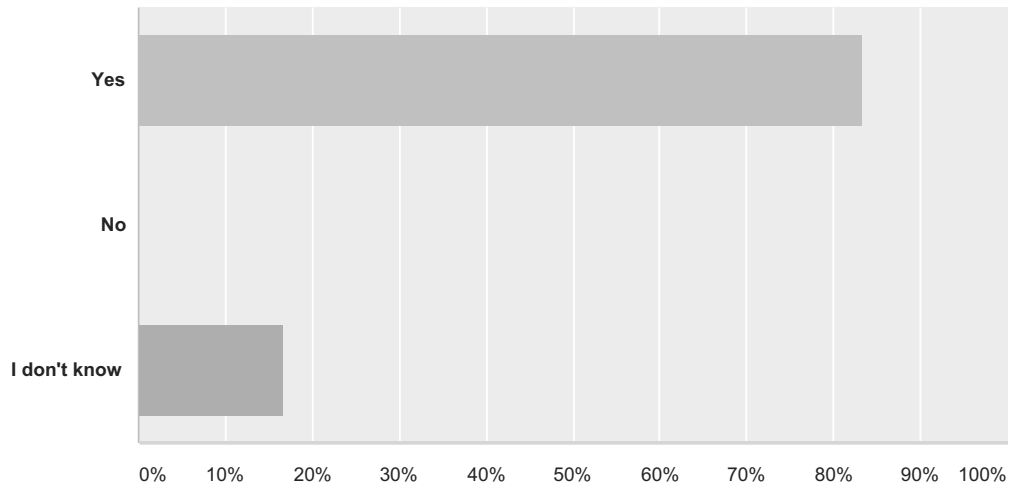
Answered: 9 Skipped: 9



Answer Choices	Responses
I never heard about Master Drug Index	11.11% 1
I don't have time	0.00% 0
It is easier to tell them how to correct the error	88.89% 8
<b>Total</b>	<b>9</b>

### Q7 Do you think that using Master Drug Index will improve quality and quantity of errors?

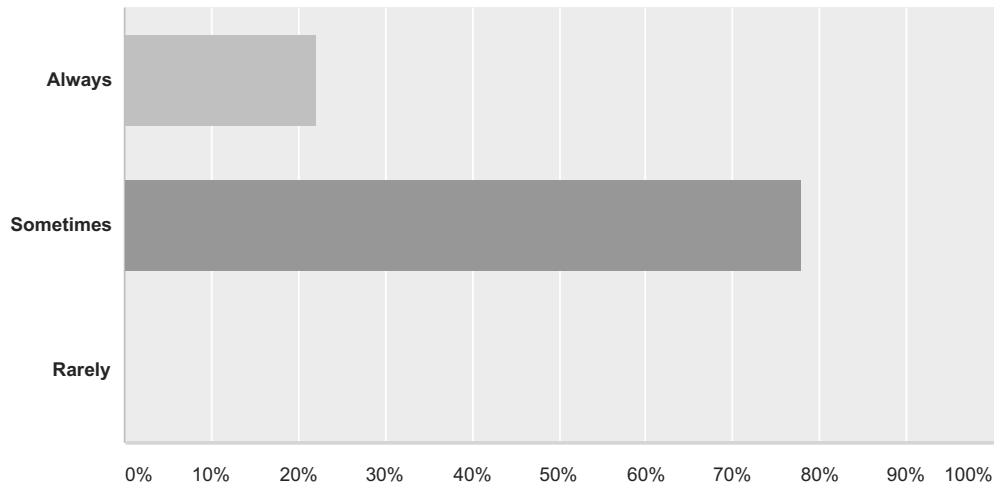
Answered: 18 Skipped: 0



Answer Choices	Responses
Yes	83.33% 15
No	0.00% 0
I don't know	16.67% 3
<b>Total</b>	<b>18</b>

### Q8 How often do you meet a prescribing error can be corrected by Master Drug Index?

Answered: 18 Skipped: 0

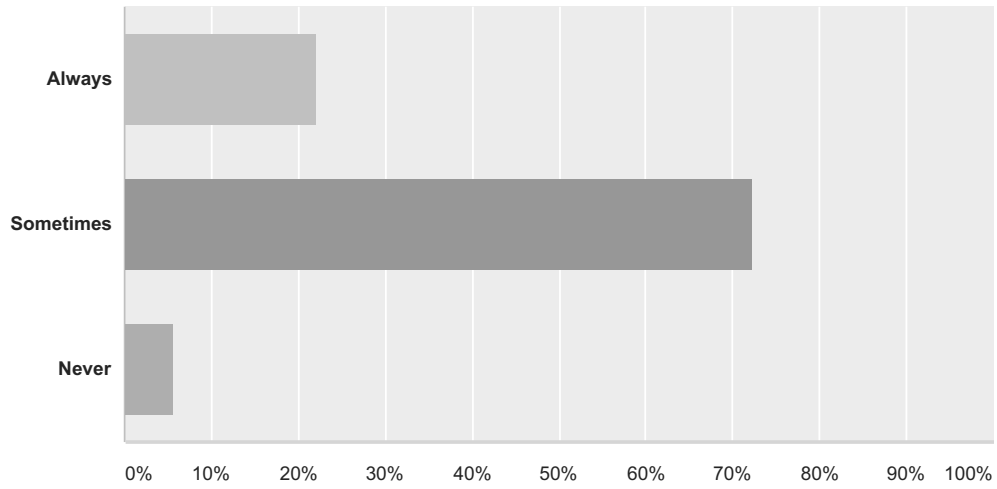


Answer Choices	Responses
Always	22.22% 4
Sometimes	77.78% 14
Rarely	0.00% 0
<b>Total</b>	<b>18</b>



### Q9 Do you report every prescribing error?

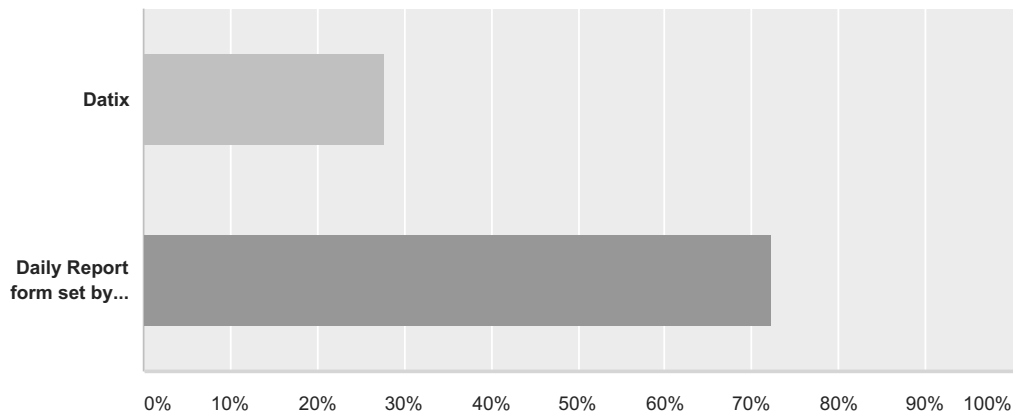
Answered: 18 Skipped: 0



Answer Choices	Responses
Always	22.22% 4
Sometimes	72.22% 13
Never	5.56% 1
<b>Total</b>	<b>18</b>

### Q10 Tools or methods used for reporting are:

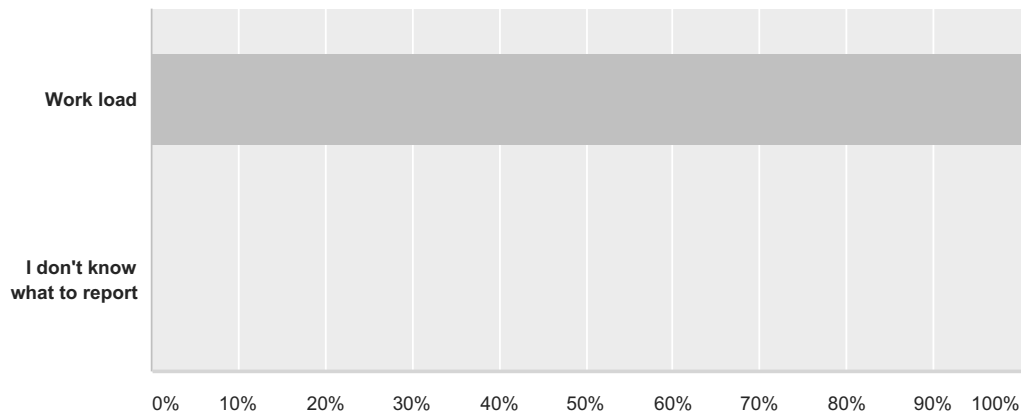
Answered: 18 Skipped: 0



Answer Choices	Responses
Datix	27.78% 5
Daily Report form set by west bay quality team	72.22% 13
<b>Total</b>	<b>18</b>

### Q11 In your opinion what are reasons for not reporting prescribing errors?

Answered: 18 Skipped: 0



Answer Choices	Responses	
Work load	100.00%	18
I don't know what to report	0.00%	0
<b>Total</b>		<b>18</b>

**Q12 What are your suggestions to improve reporting errors?**

Answered: 8 Skipped: 10

### Q13 Any further comments?

Answered: 7 Skipped: 11

# Plan Do Study Act (PDSA Cycle) Worksheet



<b>Health Center or Department: West Bay Health Center</b>	<b>Section: Pharmacy</b>
<b>Aim (What are you trying to achieve? How much? By when? Where?): To reduce medications dose and name errors by 30% by end of February 2016 in West Bay Health Center.</b>	
<b>Team Members: (QUALITY TEAM MEMBERS OF WEST BAY HEALTH CENTER) Dr Sheren (physician), Dr Noof (physician), Dr Mona Hassan (pharmacist), Dr Hisham El Mahdi (physician), Dr Mohamed Salem (physician), Dr Mohamed Hashim (physician)</b>	
<b>Date of Planning: October 25<sup>th</sup></b>	
<b>Purpose of this cycle:</b> <input checked="" type="checkbox"/> Test the change (Cycle No 1 ) <input type="checkbox"/> Implement the change <input type="checkbox"/> Spread the change	

*Every Aim will require multiple smaller tests of change*

<b>Describe your first (or next) test of change</b> (Describe what idea of change you want to test )	<b>Person responsible</b>	<b>When to be done</b> (timeline to assess your current test of change)	<b>Where to be done</b>
<p>Develop a reference in an easy and accessible way for all physicians for accessing all PHCC formulary medications. This will be done by creating a Cerner shared folder containing all Master Drug Index formulary medications to be accessible to all physicians.</p> <p>(Master drug index is developed by PHCC clinical affairs department and present under medications management policy)</p> <p>We developed a PHCC MASTER DRUG INDEX as an electronic folder includes all PHCC formulary medications to avoid mismatch between medication list in pharm net (for pharmacy) and power chart (for physicians)</p>	<p>DR Sheren (physician) DR Mona (pharmacist) DR Noof (physician)</p>	<p>NOVEMBAER 1ST</p>	<p>West Bay health center</p>

**PLAN** (How do you want to do the change?):

<b>List the tasks needed to set up this test of change</b> (Organize step-by-step list of task with responsible person beside each step along with date & location)	<b>Person responsible</b>	<b>When to be done</b>	<b>Where to be done</b>
1. Arrange for meeting for team members.	DrMohammed hashim (team lead)	NOVEMBER 1 <sup>ST</sup>	West bay health center meeting room
2. Data collection: collection of prescribing errors as a base line for one week.	Dr Mona	NOVEMBER 1 <sup>ST</sup>	West bay pharmacy
3. Develop MASTER DRUG INDEX: by start to input formulary medications with correct dose and name on a physician's favorite folder (one physician of the team) to be easily shared by other physicians through Cerner.	Dr Sheren, Dr Mona, & Dr Noof	NOVEMBER 8 <sup>th</sup>	West bay health centre clinics
4. PUT A PLAN FOR TRAINING OF PHYSICIANS ABOUT MASTER DRUG INDEX FOR TWO WEEKS THROUGH: <ul style="list-style-type: none"> <li>- E-MAIL notifications and orientation to all physicians include full information about master drug index.</li> <li>- Lectures and power point presentations for describing how to use master drug index for two consecutive weeks.</li> <li>- Orientation of pharmacists for advice to physicians with electronic prescription errors to use the master drug index as a reference for correct medication name and dose</li> <li>- Training of physicians focal one to one training and orientations.</li> </ul>	TEAM MEMBERS  DR SHEREN  DR SHEREN  Dr Mona  DR MOHAMMED HASHIM, DR Mohammed Salem, and Dr Sheren	November 22 <sup>nd</sup>	West bay health center meeting room  West bay health center  West bay lecture room  West bay pharmacy  West bay health center clinics
5. Data collection: by auditing prescribing errors regarding wrong name and wrong dose at the end of each shift for one week after carry out the test.	DR MONA & DR Hisham	DECEMBER 6 <sup>th</sup>	West bay health center pharmacy

6. Data analysis	DR MONA &DR Hisham	December 13 <sup>th</sup>	West bay health center meeting room
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<b><i>Predict what will happen when the test is carried out</i></b> <i>(include how the change will affect positively or negatively other areas of the organization/Health Center)</i>	<b><i>Measures to determine if prediction succeeds</i></b>
<p>Our predictions:</p> <ul style="list-style-type: none"> <li>➤ Decrease medications dose and name errors.</li> <li>➤ Decrease other types of prescribing errors as use of non-formulary medications.</li> <li>➤ Decrease waiting time of patients waiting for correction of prescriptions.</li> <li>➤ Decrease pharmacy callings to physicians for correction of errors.</li> <li>➤ Increase patient safety.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Daily collection of prescription with errors from both shifts.</li> <li>➤ Follow up and monitoring (audit) of physicians prescriptions weekly to focus on untrained physicians with high electronic prescription error.</li> <li>➤ Continuous measurement of errors on weekly bases.</li> <li>➤ Measuring turnaround time (TAT) in pharmacy.</li> </ul>

**DO:**

<b>Carry out the test and describe what happened during the test, Detail the <u>actual impacts</u> either internally or externally or both and include any unexpected events or problems.</b>
<p>We created a list of all PHCC formulary medications on Cerner shared folder of one of the physicians' team member under the name of PHCC master drug index. The input and revision of medications took about two weeks. We started training the physicians through:</p> <ol style="list-style-type: none"> <li>1. Email notifications and orientation about master drug index.</li> <li>2. Lectures for all physicians describing how to use master drug index folders.</li> <li>3. Focal one to one training.</li> <li>4. Also the pharmacy had an important role on orientation as they direct the physicians to use the master drug index and told them how to use it through Cerner if there is an error in the prescription.</li> </ol> <p><b>UNEXPEXTED PROBLEMS</b></p> <ol style="list-style-type: none"> <li>1. Unexpected resistance from some physicians, which took more time to convince them about the importance of having a reference in Cerner for electronic prescription, to avoid wasted time in the pharmacy to correct errors and maximize patient safety.</li> <li>2. Other unpredicted problem was lack of compliance from some physicians to regular use of master drug index. These obstacles extended the period of orientation as it took more time than planned.</li> <li>3. Another obstacle is that not all the pharmacists report errors.</li> <li>4. A Technical obstacle is the way of calculation of Cerner for the number of prescribed medications, as it calculates it per item not per prescription and no way to calculate corrected errors through Cerner except manually.</li> </ol>



## STUDY:

Describe your measured results, analyze the data you collected, compare to your prediction, whether or not the goal identified in the aim statement was achieved and by how much, summarize what was learned

We collected a Base line data during one week from Sunday to Thursday, this is done before we started orientation and training of physicians and we found the following: -

12 % of prescribing errors are due to wrong dose.

6 % of prescribing errors are due to wrong name.

10 % of prescribing errors are due to wrong duration.

2.5 % of prescribing errors are due to use of non-formulary medications.

Due to long time taken for input and revision of master drug index in Cerner, Long time for training and awareness of physicians, Unexpected problems and time limit, we will start auditing next week and collect data to measure the improvement and test the change.

Testing the change is planned to start from Sunday, December 13th to Thursday, December 17th by collecting data on the same way as our baseline data.

Although some physicians started utilizing the Master Drug Index, we are expecting that when comparing with our baseline data we might not find a significant improvement which can be related to both improved pharmacists reporting of medications errors (and this can be considered as a secondary gain) as well as sub-optimal utilization of the Master Drug Index by some physicians. That's why our project is planned to be conducted in phases and continuous cycles by repeating the same process after making the necessary adjustments to our intervention strategy so as to get better results towards our preset goals.

While creating the master drug index folder I learned a lot of issues related to medications management. Also I found that there were a lot of bias on Cerner while choosing medications, which affect patient safety, and I think this is the main cause of medication errors of electronic prescriptions. Cerner contain all medications not only related to PHCC but to all hospitals and all categories of patients and whether inpatient or outpatient which increase the chance for errors.

**ACT:**

**From your learning above, a clear statement indicating what will happen next and identifies whether or not you want to adopt the change or amend it and test again or abandon it**

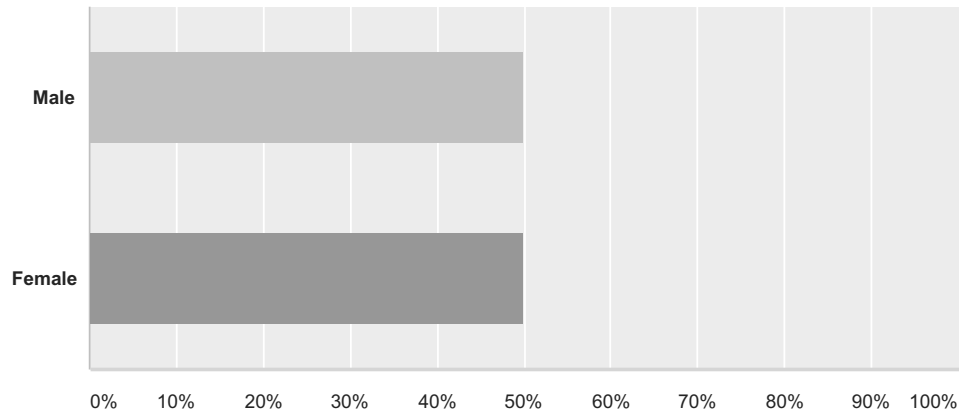
**We will continue auditing weekly up to end of January 2016.**

**We will do further training, encouragement and support for physicians With focus on physicians with more reported errors.**

**We will adopt the change if it shows improvement**

### Q1 Gender:

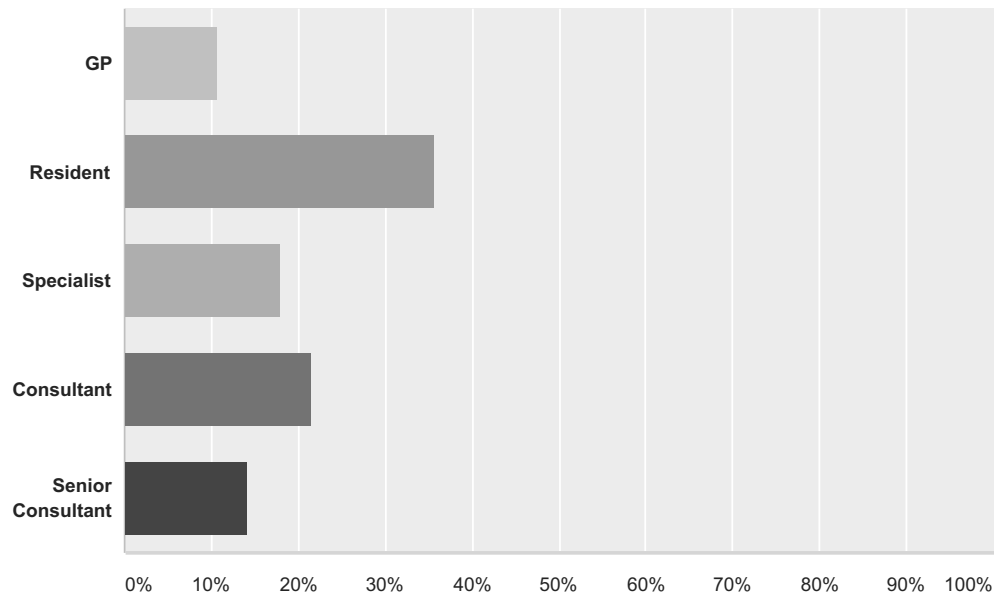
Answered: 28 Skipped: 0



Answer Choices	Responses
Male	50.00% 14
Female	50.00% 14
<b>Total</b>	<b>28</b>

### Q2 Job Title:

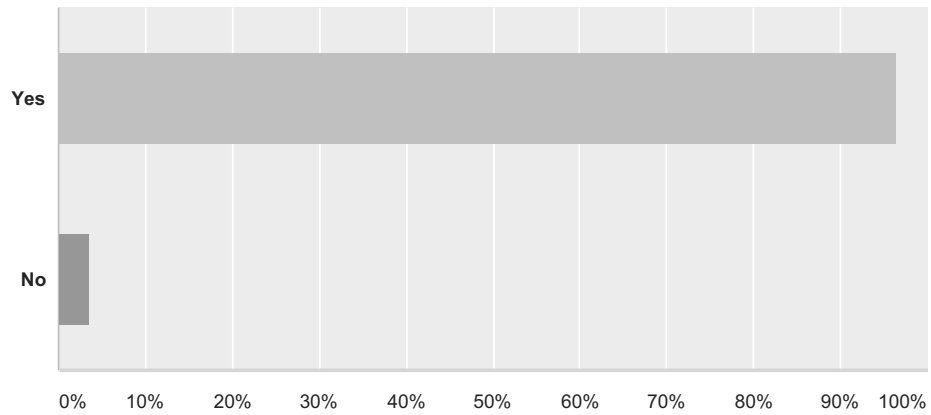
Answered: 28 Skipped: 0



Answer Choices	Responses
GP	10.71% 3
Resident	35.71% 10
Specialist	17.86% 5
Consultant	21.43% 6
Senior Consultant	14.29% 4
<b>Total</b>	<b>28</b>

**Q3 Do you know about master drug index?  
(If your answer is "No", then stop here and  
no need to complete the survey)**

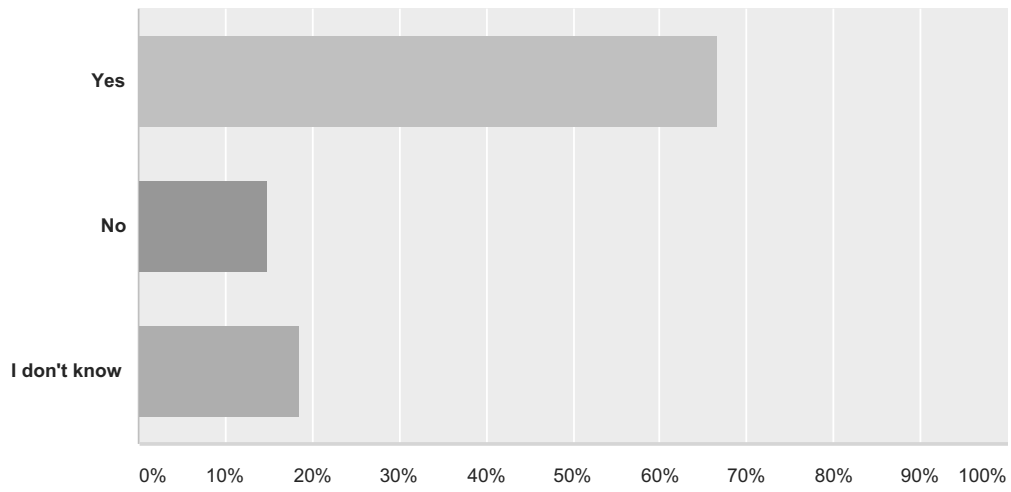
Answered: 28 Skipped: 0



Answer Choices	Responses
Yes	96.43% 27
No	3.57% 1
<b>Total</b>	<b>28</b>

### Q4 Are you satisfied with master drug index?

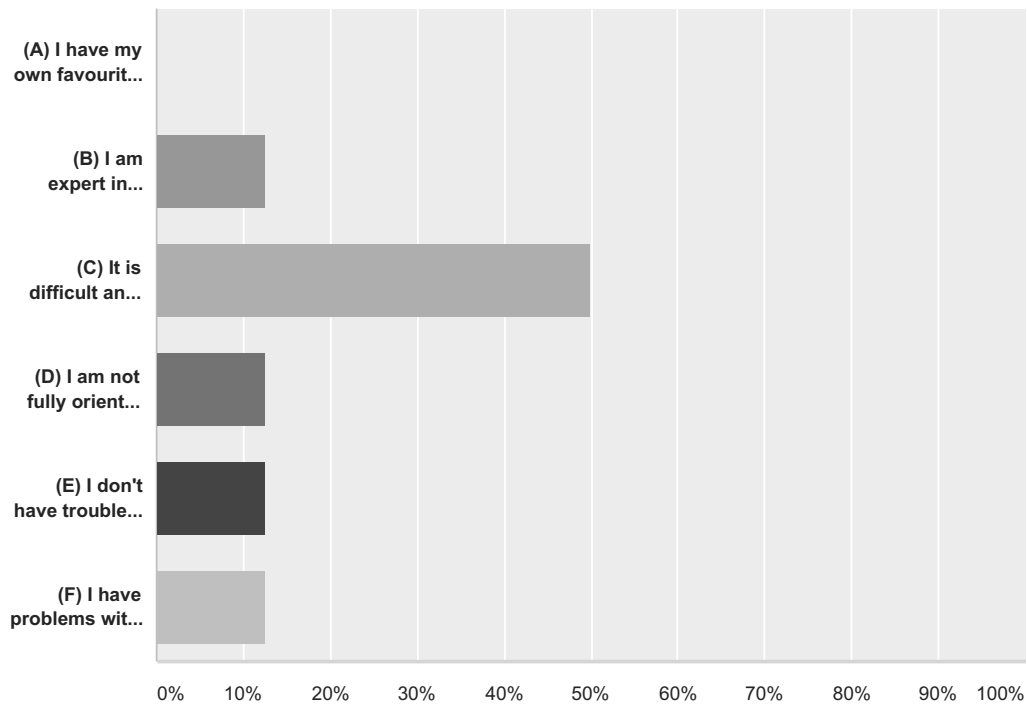
Answered: 27 Skipped: 1



Answer Choices	Responses
Yes	66.67% 18
No	14.81% 4
I don't know	18.52% 5
<b>Total</b>	<b>27</b>

### Q5 If no is the answer in question 4 please specify the cause

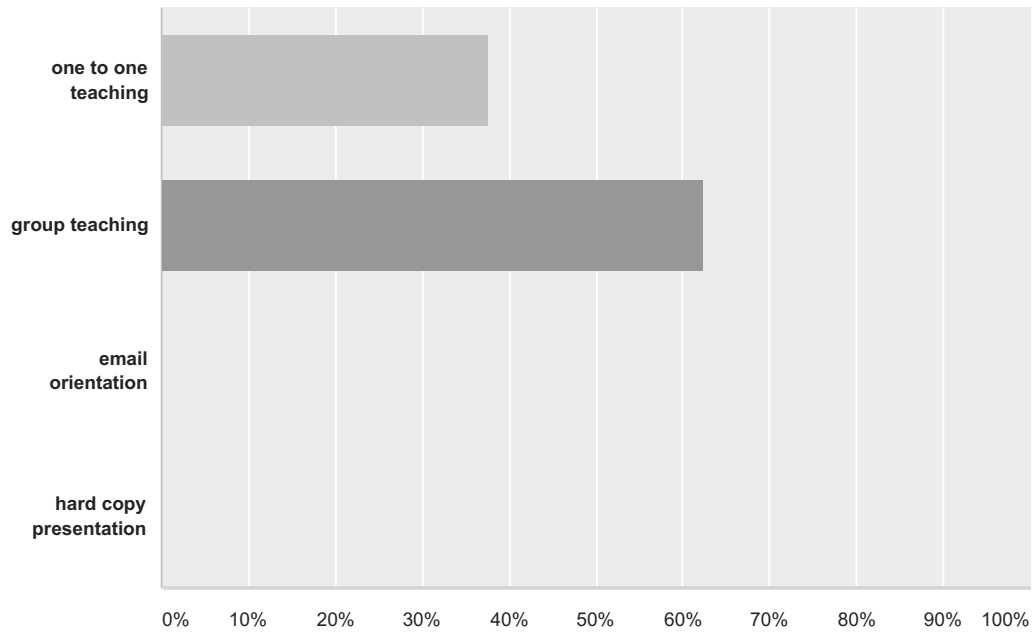
Answered: 8 Skipped: 20



Answer Choices	Responses
(A) I have my own favourite and I am not in need	0.00% 0
(B) I am expert in cerner and donot need that	12.50% 1
(C) It is difficult and complex process to search for master drug index	50.00% 4
(D) I am not fully oriented about master drug index or its significance	12.50% 1
(E) I don't have troubles with pharmacy (no much concern about my prescription)	12.50% 1
(F) I have problems with how to add to my favourite from master drug index (specify that for medications in pharmacy or in office category)	12.50% 1
<b>Total</b>	<b>8</b>

**Q6 if the cause of non compliance to master drug index is (d) (in question 5) what is the appropriate measure to do to convince you:**

Answered: 8 Skipped: 20

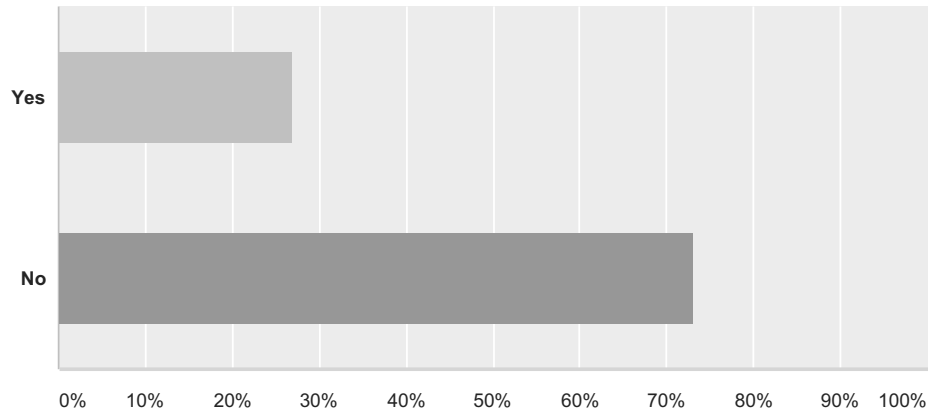


Answer Choices	Responses
one to one teaching	37.50% 3
group teaching	62.50% 5
email orientation	0.00% 0
hard copy presentation	0.00% 0
<b>Total</b>	<b>8</b>



**Q7 If you went through master drug index and used it in the last two weeks have you found any deficiency in it or is there any thing you want to add?**

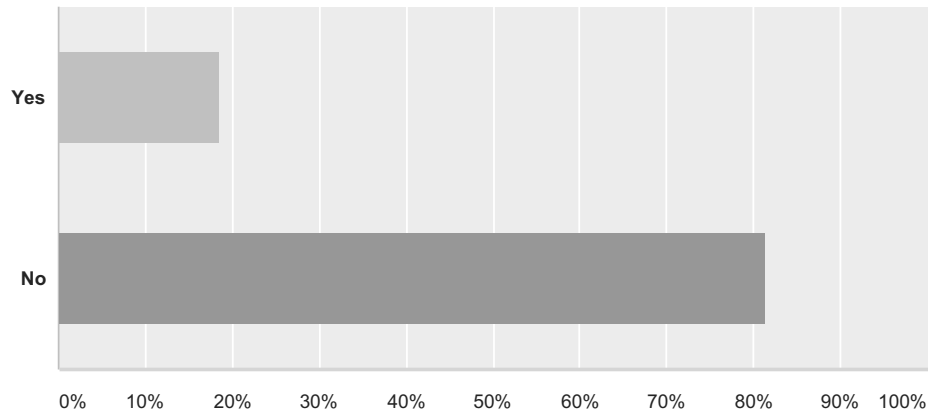
Answered: 26 Skipped: 2



Answer Choices	Responses
Yes	26.92% 7
No	73.08% 19
<b>Total</b>	<b>26</b>

### Q8 Any further comment or suggestion?

Answered: 27 Skipped: 1



Answer Choices	Responses
Yes	18.52% 5
No	81.48% 22
<b>Total</b>	<b>27</b>