MEDICATION SAFETY KNOWLEDGE, ATTITUDE AND PRACTICE AMONG COMMUNITY PHARMACISTS IN LEBANON

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Abstract

Background: The effectiveness of a national post-marketing surveillance program depends directly on the active participation of all health professionals. There was no previously comprehensive and active pharmacovigilance program available in Lebanon.

Objectives: To assess the knowledge, attitude, and practice (KAP) among community pharmacists in Lebanon in relevance to potential pharmacovigilance and adverse drug reactions reporting in Lebanon.

Methods: A cross-sectional descriptive study, using a self-administered KAP questionnaire and conducted between March and July 2016, included 1857 pharmacists practicing in community settings. As for the statistical analysis, Chi-2 test for dichotomous or multinomial qualitative variables, Wilcoxon test for quantitative variables with non-homogeneous variances or non-normal distribution.

Results: The majority of the responders had good knowledge concerning the concept and purpose of pharmacovigilance as well as about adverse drug reactions (how to report these/the importance of reporting adverse events/the definition of an adverse event and pharmacovigilance). Concerning the community pharmacists' attitude and practice towards pharmacovigilance, the majority admitted having a positive attitude towards their role in adverse drug reaction reporting and this activity was even seen as one of their core duties.

The questionnaire revealed a lack of practice and training regarding pharmacovigilance. Nonetheless, the pharmacists agreed on the Order of Pharmacists in Lebanon and the Ministry

of Health's role in promoting this practice and helping them be more involved in reporting Adverse Drug Reactions (ADRs).

The pharmacists thought they are well positioned regarding patient's safety practice in their pharmacies and the results were not statistically different between pharmacy employers and employees.

Conclusion: Lebanese pharmacists have the required knowledge and positive attitude to start reporting ADRs, were aware of ADRs occurring with various medicines post-marketing, yet were currently not able to disseminate this information widely or to record it centrally, emphasizing the importance of establishing a national ADR reporting system.

Key words: Adverse drug effects, community pharmacists, medication safety, pharmacovigilance.

What is already known about the subject?

Several reports, including those published by the World Health Organization, have focused on raising awareness of the magnitude of the drug safety problem and aimed at convincing health care professionals that reporting of adverse drug reactions is their moral and professional obligation. The ultimate goal is to reduce drug morbidity and mortality by early detection of drug safety problems in patients and improve selection and rational use of drugs.

What is new about our article?

There is very limited information available on ADRs in developing countries and countries in transition. This work is of primary importance in the field of medication safety epidemiology, since it is the first that validates the knowledge, attitude and practice (KAP) of community pharmacists in Lebanon. It is also the first study that enrolls this big number of community

pharmacists concerning their KAP about pharmacovigilance. The results of this study will allow designated authorities to set up the plan to elaborate the pharmacovigilance program in the country.

1- Introduction

Patient safety is a public concern in healthcare systems across the world (1, 2). During the last decades, it has been demonstrated by a number of studies that drug-related morbidity and mortality is one of the major health problems that is beginning to be recognized by health care professionals (HCP) and the public. Defined as “a response to a medicine which is noxious and unintended, and which occurs at doses normally used in man” (3), adverse drug reactions (ADRs) have been estimated to be the fourth to sixth largest cause of mortality in the USA (4, 5). In addition, the percentage of hospital admissions due to ADRs in some countries is about or more than 10% (3, 6-8); approximately half of them are believed to be preventable (8). Moreover, different reports show that the cost of drug-related morbidity and mortality is high (4, 9, 10) and it was estimated to be $177.4 billion annually in 2001 in the USA alone (4).

Several reports, including those published by the World Health Organization (WHO) (3), have focused on raising awareness of the magnitude of the drug safety problem and aimed at convincing health care professionals that reporting of adverse drug reactions is their moral and professional obligation. The ultimate goal is to reduce drug morbidity and mortality by early detection of drug safety problems in patients and improve selection and rational use of drugs. There is very limited information available on ADRs in developing countries and countries in transition, with this situation expected to become worse according to the WHO. This problem is caused, among others, by a lack, in some countries, of legislation and proper drug regulations, inadequate funds and lack of ADR reporting (3).

Moreover, and since the effectiveness of a national post-marketing surveillance program is directly dependent on the active participation of all health professionals, community pharmacists are in the best position to report suspected ADRs. In fact, these ADRs can be observed in their everyday patient care as they are directly related to drug dispensing and counseling (11-15). Pharmacovigilance is defined as "the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug related problem" according to the World Health Organization (16) Some studies have demonstrated that, although pharmacists have a positive attitude toward pharmacovigilance, they also have little experience with ADR reporting. The reasons for poor reporting could be the absence of awareness and culture about screening, detecting, investigating and reporting ADRs and insufficient knowledge about the concept of pharmacovigilance (17, 18). In addition, information obtained in one country (e.g. the country of origin of the drug) may not be relevant to other parts of the world, where circumstances may differ. Data derived from within the country or region may have greater relevance and educational value and may encourage national regulatory decision-making.

In Lebanon, a National Pharmacovigilance Center was launched in 2004 by the Lebanese University but carries out limited activity to hospitals (19). Moreover, adverse drug event reporting is carried out by some pharmaceutical companies' representatives to their respective scientific bureau outside Lebanon. Therefore, a comprehensive and well-structured pharmacovigilance program in Lebanon is lacking. The aim of this study was to evaluate knowledge, attitude, and practice (KAP), among community pharmacists in Lebanon and to assess their educational needs in relevance to pharmacovigilance and adverse events reporting

before launching by the Lebanese Order of Pharmacists ofan online reporting system tool for community pharmacists. The ultimate goal would be to help formulate strategies to enhance the key role of the pharmacist in the practice of medication safety.

Methods

General study design

A cross-sectional study was carried out between March and July 2016, using a proportionate random sample of community pharmacies from all districts of Lebanon (Beirut, Mount Lebanon, North, South and Bekaa). A list of pharmacies was provided by the Lebanese Order of Pharmacists (OPL) (20).

Ethical aspect

The Lebanese University school of Pharmacy Institutional Review Board waived the need for an approval based on the facts that it was an observational study that respected participants' autonomy and confidentiality and induced minimal harm to them.

Sample size calculation

A total of 4000 community pharmacists (including employers and employees) working in 2938 pharmacies are available in Lebanon. A sample of 638 community pharmacists was targeted to allow for adequate power for bivariable and multivariable analyses to be carried out according to the Epi info sample size calculations with a 4000 community pharmacists (employers and employees) working in community pharmacies in Lebanon, a 34.3% expected frequency of pharmacists' knowledge in ADR reporting (17) and a 5% confidence limits (21). At the end of the data collection, out of 2000 distributed questionnaires in 1200 pharmacies, 1857 (92.8%) were completed and returned.

Data collection process

A self-administered KAP questionnaire was designed with closed-ended questions and was distributed to all community pharmacists. Most of the questions were generated from previous studies but adapted to the Lebanese sector (14, 22-30). The detailed questionnaire was distributed to the pharmacists randomly by interviewers. The interviewers were well trained before the start of the data collection process. Each interviewer explained the study objectives to each pharmacist and did not provide pharmacists with any guidance on any of the questions; after obtaining an informed oral consent, the pharmacist was handed the anonymous and self-administered questionnaire. On average, the questionnaire was completed by participants within approximately 15-20 minutes. The pharmacist had the choice to accept or refuse to fill the questionnaire. At the end of the process, the completed questionnaires were collected back by the interviewers and sent for data entry. During the data collection process, the anonymity of the pharmacists was guaranteed by putting filled out questionnaires into closed boxes.

The anonymous questionnaire was in French or English language, the two most frequent languages spoken by the Lebanese population on top of Arabic; it was composed of different sections: 1. Socio-demographic and practice characteristics: age, gender, level of education, location of the pharmacy, demographic area, approximate number of patients per day, years of practice, working hours per week, position in the pharmacy,); 2. Question related to the definition and recognition of ADR/Pharmacovigilance; 3. Questions related to ADR reporting; 4. Questions related to patient safety and response to mistakes. The questionnaire was translated to French or English by a translator and then translated back by another translator to ensure translation accuracy. Both versions were tested on a pilot sample of 20 patients before the data collection was officially started. Translation discrepancies were few, and they were resolved by

investigators, in agreement with the translators. We also note that pilot sample test results were not entered in the final data sheet.

Pharmacists' knowledge score of pharmacovigilance was assessed by five questions whether the pharmacist 1) knew the definition of pharmacovigilance, 2) knew its purpose 3) knew the definition of an ADR, 4) knew the reasons for an ADR and 5) knew if an ADR can be due to a drug-drug, drug-food or drug-exercise interaction. Answer choices were given a numerical value of 1 for having correct knowledge and 0 for lack of knowledge. The total knowledge score ranged between 0 reflecting low / lack of knowledge and 5 reflecting correct / high knowledge.

To the best of our knowledge, there are no previously conducted studies examining the differences between owners versus employees. However, we needed to evaluate whether the employees are more likely to report ADRs than owners since they have relatively more time and less business/managerial focus and they need to give a positive impression to their employers and patients; or at the contrary, if they care less about reporting due to time constrains and workplace pressure.

Statistical analysis

Data entry was performed by one inspector who was not involved in the data collection process. Statistical analysis was performed using SPSS software, version 22. Two sided statistical tests were used; Chi-2 test for dichotomous or multinomial qualitative variables, Wilcoxon test for quantitative variables with non-homogeneous variances or non-normal distribution. The Student

t-test was used to check for an association between continuous and dichotomous variables. The ANOVA test was used to compare multiple group means. A $p<0.05$ was considered as significant.

Results

Socio-demographic results

Out of 2000 distributed questionnaires in 1200 pharmacies, 1857 (92.8%) were completed and returned. All respondents completed the questionnaire in its entirety; 50.3% were female and 49.7% males; the mean age was 38.9± 11.5 years; 73.4% were employers and 26.6% employees. The socio-demographic and socioeconomic characteristics of the participants are summarized in Table 1.

Knowledge of the community pharmacists concerning pharmacovigilance

The results of the community pharmacists' knowledge about pharmacovigilance and adverse drug reactions (ADRs) are summarized in Table 2. Sixty seven percent of pharmacists defined "Pharmacovigilance" as "The detection, assessment, understanding and prevention of adverse effects". Their answers regarding the purpose of pharmacovigilance varied from the improvement of public health/ patient care and safety in relation to the use of medicines (13.6%/ 22.1% respectively), to the assessment of the benefit, harm, effectiveness, and risk of medicines in Phase 4 Clinical Studies (18.9%) and the promotion of understanding, training and communication of Pharmacovigilance to HCPs and Public (19.4%). Adverse drug reaction was defined as the noxious, unintended response to a drug by 44.5% of the pharmacists while 28.1% considered that it is the untoward medical occurrence in a patient administered a pharmaceutical product. Almost all questioned pharmacists considered that ADRs could be related to any prescription drugs, OTC drugs, herbal drugs, vaccines and blood products (90.2%) and that they can be related to drug-drug interactions, drug-food interactions or drug-exercise (92.6%).

Attitude of community pharmacists concerning pharmacovigilance

The attitude and practice of the community pharmacists concerning pharmacovigilance and ADRs are summarized in Table 3. The majority of the questioned pharmacists (81%) declared that they have come across an ADR during their practice at the pharmacy. In addition, 76% admitted that the pharmacist is in charge of reporting an ADR and this activity should be a compulsory one (79.2%). When asked about the role of all other HCPs in pharmacovigilance, the community pharmacists considered that among all other persons in charge of reporting ADRs, the pharmacist and the physician are believed to play the most important role (40.4% and 26.6% respectively; Figure 1) and this activity is necessary for all health care professionals (95.1%).

Practice of community pharmacists concerning pharmacovigilance

When the pharmacists were asked about their practice in pharmacovigilance, 81.5% declared that they know the resources to be used when needed to identify an ADR and these resources include mainly internet sites (29.4%), drug information sheets or leaflets (18.4%), books (14.6%) as well as electronic references and databases (13.1%). However, despite their knowledge, pharmacists admitted facing some challenges for ADRs reporting because of their lack of knowledge in reporting (23%) or their need for training and lectures to better define an ADR (23.6%) (Figure 2). Moreover, patients do not usually inform them about ADRs (23.2%). Therefore, they considered that the OPL, along with the Ministry of Public Health (MPH), are responsible for the promotion of pharmacovigilance practice among community pharmacists in Lebanon (38.1% and 31% respectively). Finally, the majority admitted that they have never

received a pharmacovigilance training/education (71.6%) and they think that an adequate training can influence ADR reporting pattern (91%).

Comparison between employers and employees pharmacists concerning pharmacovigilance and overall evaluation

A comparison was done between pharmacy owners and staff pharmacists concerning their knowledge, attitude and practice concerning pharmacovigilance; no statistically significant results were noted for any of the evaluated variables ($p>0.05$ for all variables). In addition, the pharmacists were asked to rate their work regarding patient safety in their pharmacies: the majority thought that they are well positioned (Good, n=488, 27%; Very good, n=767, 42.5%; Excellent, n=480, 26.6%).

Bivariate analysis of factors associated with the knowledge score

A significantly higher mean knowledge score was found in female pharmacists (2.15) compared to their male counterparts (1.95) ($p<0.0001$). The knowledge was significantly but negatively correlated with age ($r= -0.057$; $p=0.024$). A significant difference in the knowledge score was also found between the levels of education ($p<0.0001$), however, the association with the number of years of experience tended to significance ($p=0.058$).

Patient safety and response to mistakes

We finally aimed at identifying the link between patient safety related to the mistakes committed. Results are summarized in table 4. Ninety five percent of the pharmacists declared figuring out the process that led to a mistake, while 76.8% would help their staff learn from that mistake. Ninety percent would change the way things are done after the mistake happen and 82% considered that these mistakes led to positive changes in the pharmacy. Only 22% of the

pharmacists admitted that the staff feels that the mistakes are held against them. When asked about their practice, 94% of the pharmacists confessed strongly focusing on patient safety.

DISCUSSION

Reporting adverse drug reactions (ADRs) related to a certain drug provides important security information and improves understanding of the drug's risk profile. To ensure patient safety, these events need to be detected, monitored, counted, confirmed and investigated (26). Community pharmacists play a key role in this process of post-marketing surveillance as they are directly related to the drugs' dispensing and patients' counseling.

Overall, the majority of the responders (employers or employees) had a good knowledge concerning the concept and purpose of pharmacovigilance as well as about ADEs. They believe that pharmacovigilance allows the detection, assessment, understanding and prevention of adverse effects and therefore contributes to patient safety and public health as defined by both WHO and FDA (3, 31). In fact, this system allows assessing the benefits, harm, effectiveness and risk of drugs and medicines which are the primary advantages of ADE reporting as described previously (26, 32). The majority of the pharmacists knew how to define correctly ADR (3) and admitted that they can be reported with any pharmaceutical product or even related to drug related interactions.

Concerning the community pharmacists' attitude and practice towards pharmacovigilance, the majority of the responders admitted having a positive attitude towards their role in ADR reporting and this activity was even seen as one of their core duties. They also considered that,

in their pharmacies, they are well positioned regarding patient's safety. A number of studies, including some realized in Arab countries, corroborate with the findings from our study (28, 30, 33-35) and a very recent Korean study revealed that spontaneous reporting is considered as part of the professional duties of 95% of the questioned pharmacists (n=1001) (30). In other studies, nevertheless, pharmacists considered that ADE reporting disrupts the workflow and it is considered as an additional duty and not an integral part of their professional duties (26, 36). The difference could be explained by the fact that in our study, we evaluated the pharmacists' intention to report and not the real practice, as the ADE reporting system is currently being established and not active yet in Lebanon, and therefore these pharmacists are not aware of the workload of the reporting system. Furthermore, despite that positive attitude, the pharmacists considered that the main barriers for reporting are the lack of knowledge about ADR reporting processes and judgment, the need for training to better define ADRs and time constraints as well as workplace pressure. These factors have been previously reported; in fact, numerous studies have shown a positive relationship between knowledge level and reporting behavior (17, 25, 32, 37-39). In addition, a Portuguese cluster-randomized controlled trial involving education intervention resulted in a 10-fold increase in the number of ADRs reports (39).

Regarding the resources needed to identify ADRs, most of the pharmacists rely on information from internet sites and drug information sheets or leaflets. However, pharmacists should be aware that drug package inserts record only limited information, especially when it comes to generic drugs and not all internet sites could be reliable with trustworthy information.

As for pharmacovigilance training/education, most of the community pharmacists admitted that they have never received any training/education and considered that the OPL along with the MPH should promote pharmacovigilance practice, as it is done by the FDA or other regulatory agencies in the world.

Finally, in our study, other than defining and reporting ADRs, we assessed patient safety and the response to mistakes that might happen in community pharmacies.

Strength and limitations of the study

To the best of our knowledge, this is the first study conducted on a very large number of randomly selected community pharmacies with a response rate of 93%. Most of the published studies were realized on much smaller samples (the largest being of 377 (25, 26, 28, 35, 40, 41)) with sometimes very low response rates (25). Only one Korean study included a total of 1001. The sample is therefore representative of the Lebanese pharmacists and the high response rate allows the generalizability of the results.

A selection bias is still however possible because of the seven percent refusal rate. The use of a questionnaire in participants may not always be accurate: problems in question understanding, question-wording, recall deficiency and over or under evaluating the questions / knowledge, which can lead to a possible information bias. In addition, the cross-sectional design of our study provides data on existing situation at a particular point in time where the national reporting system has not started yet. It would be much more interesting, in the future, to evaluate the

knowledge, practice and attitude of the Lebanese pharmacists regarding the adequacy and level of reporting in particular of serious ADE and to assess the barriers and facilitators of reporting these ADE. Finally, the fact that this is largely a theoretical exercise since these pharmacists have never used a national reporting system, is a limitation in comparison to other studies.

CONCLUSIONS

This study clearly shows that Lebanese pharmacists have the required knowledge and positive attitude to start reporting ADRs. Pharmacists were aware of ADRs occurring with various medicines post-marketing, yet were currently not able to disseminate this information widely or to record it centrally. This emphasizes the importance of establishing a national ADR reporting system in Lebanon and enhancing their positive attitude and intentions towards reporting. In that perspective, the OPL Drug Safety Subcommittee established an online reporting system tool to better implement the pharmacovigilance in community pharmacies. The online tools have been reported to be more efficient than the conventional/traditional tools (post, fax, e-mail or telephone) (42, 43). Moreover, the scientific and continuous education subcommittees are programming different types of training and education programs (continuing education and seminars) related to ADE. That way, community pharmacists (as well as pharmacy students) would be trained on what to be reported, how to report, the basics of a good report, the definition of serious ADEs, as well as on the operation of the online reporting system. This new approach promotes the pharmacists' awareness and knowledge of ADE reporting and consequently their practice regarding drug safety and pharmacovigilance.

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Tables

Table 1. Sociodemographic and socioeconomic characteristics of the participants (n= 1857)	
Factor	**N (%)**
Gender	
Male	923 (49.7%)
Female	934 (50.3%)
Age (in years)	
20-30	570 (30.7%)
31-40	572 (30.8%)
41-50	397 (21.4%)
51-60	227 (12.2 %)
>60	91 (4.9%)
District	
Beirut	221 (11.9%)
Mount Lebanon	1053 (56.7%)
North	78 (4.2%)
South	248 (13.3%)
Bekaa	257 (13.8%)

Educational level	
Bachelor	1255 (67.6%)
Pharm.D.	364 (19.6%)
Masters	204 (11.0%)
PhD	35 (1.9%)
Professional status	
Employer	1363 (73.4%)
Employee	494 (26.6%)
Experience	
Less than 6 months	95 (5.1%)
6 months to 1 year	91 (4.9%)
1 year to less than 3 years	277 (14.9%)
3 years to less than 6 years	340 (18.3%)
6 years to less than 12 years	377 (20.3%)
More than 12 years	676 (36.4%)
Approximate number of patients seen per day in the pharmacy	
< 10	36 (1.9%)
10-50	836 (45.0%)
50-100	613 (33.0%)
> 100	372 (20.0%)
Working hours per week	
1-16 hours per week	61 (3.3%)
17-31 hours per week	85 (4.6%)
32-40 hours per week	210 (11.3%)
More than 40 hours per week	1502 (80.9%)
Social status of the patients	
Poor	232 (12.5%)
Middle	1530 (82.4%)
High	76 (4.1%)
Do not know	19 (1.0%)

Table 2. Knowledge of the community pharmacists concerning pharmacovigilance.	
Pharmacovigilance is:	
The science of Adverse Drug Reaction reporting	246 (13.6%)
The science of understanding safety of drugs	158 (8.8%)
The detection, assessment, understanding and prevention of adverse effects	1206 (66.9%)
The science of identifying predisposing risk factors related to Adverse Drug Reactions	163 (9%)
Multiple answers	27 (1.5%)

The Purpose of Pharmacovigilance is/are: (multiple answers)	
Improve public health and safety in relation to the use of medicines	242 (13.6%)
Improve patient care and Safety in relation to the use of medicines	393 (22.1%)
Assess the benefit, harm, effectiveness, and risk of medicines in Phase 4 Clinical Studies	336 (18.9%)
Promote understanding, training and communication of adverse drug reactions reporting to HCPs and Public	346 (19.4%)
Multiple answers	463 (26%)
Adverse Drug Reaction ADR is:	
The noxious, unintended, response to a drug	827 (44.5%)
The untoward medical occurrence in a patient administered a pharmaceutical product	522 (28.1%)
The serious side effect of a medicinal product	299 (16.1%)
The adverse event of a drug due to its use outside the terms of marketing authorization	209 (11.3%)
Do you think ADR are related to: (multiple answers)	
Prescription drugs	93 (5.3%)
OTC drugs	23 (1.3%)
Herbal drugs	31 (1.8%)
Vaccines	11 (0.6%)
Blood products	14 (0.8%)
All of the above	1590 (90.2%)
Do you think that an ADR could be due to a drug-drug interactions, drug-food interactions or drug-exercise?	
Yes	1697 (92.6%)
No	32 (1.7%)
Neutral/ I don't know/ does not apply	104 (5.7%)

Table 3. Attitude of the community pharmacists about pharmacovigilance.	
Have you ever come across an ADR?	
Yes	1461 (81%)
No	68 (3.8%)
Neutral/ I don't know/ does not apply	176 (9.8%)
In your opinion, is the pharmacist in charge of reporting an ADR?	
Yes	1411 (76%)
No	446 (24%)
Do you think ADR reporting should be a compulsory activity for you?	
Yes	1444 (79.2%)
No	135 (7.4%)
Neutral/ I don't know/ does not apply	244 (13.4%)
Who among the listed is/are responsible of reporting an ADR? (Multiple answers possible)	
Physician	929 (26.6%)
Pharmacist	1411 (40.4%)
Patient	719 (20.6%)
Family	405 (11.6%)

None of the above	32 (0.9%)
Do you think ADR reporting is necessary for all health care professionals?	
Yes	1751 (95.1%)
No	19 (1%)
Neutral/ I don't know/ does not apply	72 (3.9%)
Do you know the resources to be used when needed to identify an ADR?	
Yes	1472 (81.5%)
No	68 (3.8%)
Neutral/ I don't know/ does not apply	266 (14.7%)
What are the sources that you usually use? (Multiple answers possible)	
Internet sites	1171 (29.4%)
Electronic references and databases	521 (13.1%)
Books	583 (14.6%)
Medical journals	297 (7.4%)
Companies	189 (4.7%)
Drug information centers	493 (12.4%)
Drug information sheets or leaflets	734 (18.4%)
What might be the challenge(s) for you to report an ADR? (Multiple answers possible)	
I do not know how to report an ADR	624 (23%)
Patients do not usually inform me about ADRs	630 (23.2%)
Time constrains/workplace pressure	409 (15.1%)
Difficulty to judge about the occurrence of ADR	410 (15.1%)
Need for training, lectures to better define an ADR	642 (23.6%)
In your opinion, what is/are the organizations in Lebanon that should promote pharmacovigilance practice? (Multiple answers possible)	
Lebanese Order of Pharmacists (OPL)	1385 (38.8%)
Ministry of Public Health (MPH)	1108 (31%)
Academic Institutions	593 (16.6%)
Health Care Institutions	484 (13.6%)
Have you ever received pharmacovigilance training/education?	
Yes	502 (27.4%)
No	1328 (72.6%)
Do you think pharmacovigilance training for pharmacists can influence ADR reporting pattern?	
Yes	1689 (91%)
No	20 (1.1%)
Neutral/ I don't know/ does not apply	148 (8%)

Table 4. Patient safety and response to mistakes

When a mistake happens, we try to figure out what problems in the work process led to the mistake	1721 (94.8%)
This pharmacy helps staff learn from their mistakes rather than punishing them	1393 (76.8%)
When the same mistake keeps happening, we change the way we do things	1620 (89.6%)
We look at staff actions and the way we do things to understand why mistakes happen in this pharmacy	1346 (74.7%)
Staff feel like their mistakes are held against them	392 (22.1%)
The way we do things in this pharmacy reflects a strong focus on patient safety	1695 (94%)
Mistakes have led to positive changes in this pharmacy	1479 (81.8%)