Pharmacy Education, 2011; 11 (1): 99 - 106

Teaching ethics to pharmacy students using a team-based learning approach

SANAH HASAN

Department of Pharmacy Practice, College of Pharmacy, University of Sharjah. Sharjah, United Arab Emirates

Abstract
Background: Team-based learning (TBL) has been implicated in teaching different modules to pharmacy students, no studies have incorporated (TBL) in teaching ethics.
Aims. To utilize a team-based learning approach in teaching ethics in pharmacy practice to undergraduate pharmacy students.
Method. The ethics section of a pharmacy practice course consisting of 11 contact hours was modified in to a team-based module consisting of initial individual and group readiness assurance tests followed by group application exercises.
Results. Faculty-student contact time was about the same for both the traditional method and the team-based method. Students rated the TBL sessions positively. Faculty time preparing for the course increased since it is the first time to introduce the course using this approach.
Conclusion. The approach has shown to benefit student performance in their assessments and to help in attaining skills of higher problem solving and application of knowledge. Students possibly acquired team-working and self-learning skills needed in the future.

Keywords: *ethics, learning , pharmacy education, team-based, undergraduate*

Introduction

Pharmacists are assuming more responsibility in caring for their patients at the present time. With these new responsibilities, come many ethical dilemmas that the pharmacists will have to deal with and find optimum ways in which to handle them. Pharmacy academics carry the responsibility of preparing students for their practice and to teach them skills needed in order to address ethical challenges that may arise. Since health care ethics cannot be discussed in the abstract, one must illustrate concepts through real-life examples and through a systematic approach to resolving ethical dilemmas. Several studies have suggested that growth in student moral development can be stimulated by discussions of moral dilemmas or case studies (Self *et al*., 1993, Self *et al*, 1998, Latif, 1999, Latif, 2000, Self *et al*., 1992). Dilemma discussions give students practice in moral problem solving and helps them to understand a higher level of moral argument made by their classmates (Latif, 2000). An alternative to classroom lecturing would seem to be necessary to transition students from passive listeners to active problem solvers and lifelong learners. Team-based learning (TBL) may be a reasonable approach to teaching ethics in pharmacy practice curricula as it entails on active student learning of both content and application. It requires continuous student attendance and participation, and allows for students to learn from each other through discussion and evaluation (Nieder *et al.,* 2005). It has gained interest in medical education over the last ten years due to the increase in student participation (Heidet *et al.,* 2004) and improved quality of student communication (Hunt *et al.,* 2003) but without requiring large numbers of faculty facilitators (Thompson *et al*., 2007). Team-based learning differs from other forms of small group work in that it involves developing and using learning teams as an instructional strategy (Michaelson, 2002). Students are held responsible for their individual preparedness to the class before the session, to their contribution to group performance, to their involvement in the group application problems during the session and finally to their performance in the overall final examination of the course (Michaelson, 2002). The College of Medicine and Health Sciences at the University of Sharjah is in the process of implementing team-based learning in a number of courses and modules after a successful period of experimentation within a few courses over the last two years. Faculty at the College of Pharmacy as part of the medical complex team have received TBL training in a two-day workshop and are encouraged to incorporate components of this teaching and learning approach in their courses. The University of Sharjah offers a five-year bachelor of pharmacy degree based on a contractual agreement with the Australian Monash University. With its curricular emphasis on clinical pharmacist skill attainment, the program itself is considered non-traditional in comparison to other available programs in the country or even in other nearby countries. There are nine pharmacy practice course series that start in the first semester of the program and finish in the last semester with the experiential training clerkships. Pharmacy ethics is a component of one of the pharmacy practice courses usually taught to third year students in a didactic lecturing fashion.

*Correspondence: Sanah Hasan, PharmD. *Department of Pharmacy Practice, College of Pharmacy, University of Sharjah. Sharjah, United Arab Emirates. Tel: 971-503608206. Fax 971-6-5585066 E.mail: shasan@sharjah.ac.ae*

ISSN 1447-2701 online

Due to the increasing number of admitted students and the subsequent larger class size leading to a disproportionate student to instructor ratio, a modified learning mechanism is seen to be warranted. Team-based learning has been suggested as a viable active learning strategy in large class size courses (Letassy *et al.,*2008). In addition, active learning strategies are needed in order for students to assume more responsibility in their own learning which in turn should encourage lifelong self-directed development. For teaching medical ethics, TBL should allow for more time being allotted to integrate and apply learning from pre-assigned reading out of classroom contact and to practice critical thinking skills and professional judgment through application exercises of a variety of case scenarios during class. Although TBL strategy has been integrated in different aspects of pharmacy curricula (Letassy *et al.,*2008, Conway *et al.,*2010), no report has been published yet as to the use of this strategy in teaching ethics to pharmacy students. Hence, the objective of this publication is to report the experience with TBL in teaching a medical ethics course to pharmacy students with both its positive aspects as well as its challenges.

Method

The Pharmacy Practice IIB course is offered to students in their third year of study and covers aspects of hospital pharmacy services including drug utilization reviews, drug information services and participation in clinical trials, other topics include pharmacy law, and ethics. The ethics portion of the course traditionally consisted of 11 contact hours of lecturing of concepts and application. This semester, the lectures were transformed in to four, three-hour TBL sessions. Fifty six students were enrolled in the course (one students dropped from all courses towards the end of the semester due to personal reasons) which was taught by one faculty member. At the beginning of the semester, students were randomly divided in to 11 teams of five (one team consisted of 6 students) and were notified that team members will stay the same for the whole semester. Topics covered under this portion of the course are included in Table I.

Table I. Topics covered in the ethics module of the pharmacy practice course:

1. Code of ethics
2. The duty to do good and avoid harm
3. Privacy & confidentiality
4. Principle of autonomy
5. Rule of informed consent
6. Principle of veracity
7. Paternalism
8. Health ethics committees
9. Humans in clinical trials & research
10. Medical consumerism
11. Impact of technology on information handling
12. Principles of avoidance of killing
13. Abortion, sterilization and contraception

Elements of the TBL sessions

Prior to each TBL session, reading assignments were prepared and designed to be completed individually by all students. In essence, they aimed to cover conceptual and basic knowledge in ethical medical principles based on predetermined course objectives. These reading assignments needed to be prepared carefully by the faculty member in order to cover the course objectives and key concepts in a language that is suitable for students whose mother language is non-English. The literature and various textbooks covering ethics from a pharmacist point of view were consulted in preparing the assigned readings (Veatch and Haddad, 2008, Gettman and Arneson, 2003, Salek and Edgar, 2002, McCarthy, 2008). These consisted of handouts, assigned chapters from textbooks, journal articles and slide presentations. Each TBL session started with the Readiness Assurance Process (RAP) including an Individual Readiness Assurance Test (IRAT) consisting of ten multiple choice questions for which students were given 12-15 minutes to complete. A Group Readiness Assurance Test (GRAT) followed, which basically consisted of the same test except now it was taken by the whole group, the group was given a 10 minute period to discuss the answers and convince each other of selecting only one of the four possible items in the multiple choice question. The group submitted one Scantron answer sheet for their GRAT test but all group members obtained the same grade. Immediate grading was possible for the multiple choice questions and so allowing for discussion of answers. The faculty member discussed the test answers with the whole class and gave feedback to all groups on their performance, test results and grades which were made public during the discussions, so that other group members are aware of the reasons for choosing the right answer. Appendix 1 lists examples of a number of questions used in the RAP. A short lecture period was allotted to permit clarification of concepts and resolution of any misunderstanding of the reading assignment content. This phase normally lasted for 30 minutes and so it concluded the first hour of class.

The next step in the process involved students completing the application exercises as a group. The application exercises consisted of case scenarios covering themes included in the reading assignments. Students were given a number of scenarios containing ethical dilemmas pharmacists could be faced with during their practice and representing concepts covered in the RAP. The scenarios were adopted from the literature but also modified to suit the local and cultural context. Examples of case scenarios are included in Appendix 2. Within their teams, students were asked to discuss the case, debate what the pharmacist should or should not do in a given scenario and finally submit a short report of what the team thought would be an ethical behavior that the pharmacist should adopt. Members of the team were allowed to disagree with the majority of their team members but were asked to offer justification for their opinions in the written report. A total of eight case scenarios were presented to the teams for discussion and submission of the written report. The length of this activity averaged between 90 and 120 minutes of class time.

The last 10-15 minutes of the session were devoted to student evaluations of each other and the TBL approach to learning.

Results

Assessments

The ethics portion of the course constituted about 20% of the total course grade. The IRAT, GRAT and the application case reports constituted 12% of the final grade (4% each), the other 8 % were covered in the Final course examination.

Subsequently, the IRAT, GRAT and application exercises each constituted 20% of the total TBL course assessment scores while the Final exam assessment comprised 40%. Evaluation of submitted written reports about application scenarios were graded according to the criteria used by (Smith *et al*., 2004) and it was based on the following:
The capability of students to identify an ethical dilemma
The capability to appreciate different opinions
The capability to formulate a plan
The capability to justify actions
The last assessment consisted of a final examination of the pharmacy practice course which was administered at the end of the semester including the TBL-conducted ethics portion of the course. Students were given a combination of multiple choice and open-ended questions to test understanding of concepts and the capability to critically problem solve case scenarios. Table II summarizes some of the grade scores achieved in individual TBL components, the final examination as well as the average percentage scores of the non-TBL portion of the course.

Student evaluations
Student evaluation of the TBL session was carried out in the form of open-ended questions. All fifty six students were asked to comment on the form on the value of the TBL sessions in affecting the level of their knowledge, understanding of ethical concepts and the capability to apply them in solving case scenarios. They were also asked to rate the TBL sessions as far as the level of interaction with other classmates and the extent these sessions emphasized group work. Other items included rating the types of resource available to students in completing their assignments such as people, time, textbooks, handouts, IT resources, etc. An additional section on the evaluation form was included to allow students to add any additional comments that they had regarding the TBL experience. Students' evaluations of the TBL sessions in the form of comments made on the evaluation form were analyzed and grouped in to themes. Table III lists themes generated out of students' comments. Four themes emerged including group interaction and team building, self learning and interdependence, effect of group discussion on learning and possible retention of material and finally the interest in wider future offerings of this format in the same course and other courses.

All students with no exception rated the TBL sessions highly as far as increasing their knowledge and understanding of the subject and enhancing their capability to apply concepts learnt in practical cases. Students reported an increased interaction between team members and improved understanding of concepts during team discussions. They also reported an increased capability to handle ethical dilemmas through interaction with other students and listening to their opinions. However, some students (20%) raised concerns over the difficulty of reading assignments and requested that these be shorter and at simpler level. Since the sessions were carried out towards the end of the academic semester, many students (26%) recommended this portion of the course be moved to the beginning of the semester in order for students to adequately prepare for the sessions and do well in the assessments.

A team-self assessment was also carried out by all team members. Team members evaluated the performance of their whole team in meeting deadlines, in setting agendas for discussion, and in time, debate and conflict management. Individuals within teams evaluated each other's performance as far as their readiness for the session, their contribution to the GRAT and the application exercise discussions and finally in synthesizing the team's final written report after each case. These peer evaluations were not included in the total grade due to students' concerns over the idea of being graded by an inexperienced evaluator. This peer evaluation was still seen to be of value in alerting students to what an evaluator would look for in their performance, hence guiding their preparedness.
Overall, students evaluated their whole team performance positively, there were a couple of reports of conflict between group members over debate and time management but these seem to have resolved without the intervention of the faculty member. Most students also evaluated other team members positively, but as expected, some group members were seen to be either contributory, dominant in the discussions while others were seen to be shy and may be unprepared for the session. Table III includes some of the comments made as part of the peer evaluations.

Table II. Average scores achieved for the different assessments used in the course. No.=55

	IRAT max=4 points(20%)	GRAT max=4 points(20%)	Application exercises Max =4 points (20%)	TBL portion Final exam max=8 points (40%)	Total TBL Max=20 points(100%)	Non-TBL portion
Average score	3	3.5	3.2	6.2	15.9	
Average percentage of total TBL grade obtained by students	15%	17.5%	16%	31%	79.5%	
Average percentage achieved in each type of assessment	75%	87.5%	80%	77.5%	80%	74.8%

Table III. Themes generated from students' comments as part of TBL session evaluation

Theme:
Group interaction and team building
Comments:
I now know my classmates more than I did before. I talked to people in my class that I thought I would never talk to.
We heard from very quiet students whom we never hear their voice. I actually felt I benefited more because I worked with a group of students whom I never worked with before.
I learned that there was no right or wrong answer in ethical dilemma handling, people see things differently.
When we discussed an ethical dilemma, I learned to appreciate other people's opinion.
Theme:
Effect of group discussion on learning and possible retention of material
Comments:
I could see different angles to the issue after discussion with other students.
I understood more when we discussed material within our group than when I read the assignment alone.
I learned that I could change my mind about an ethical issue after discussing it with my classmates.
Theme:
Self learning and interdependence
Comments:
This approach taught us self-dependence and held us responsible for our learning.
I think I will remember the knowledge gained during these sessions much more than in a traditional lecture because I was active in gaining this knowledge.
I learned to be confident in defending my view in a discussion as I was prepared before class and after all members shared their views of the ethical dilemma.
Theme:
Interest in wider future offerings of this format in the same course and other courses.
Comments:
Could this approach be applied in other topics in this course and other courses?
We could benefit from this TBL approach in other courses.

Discussion

A TBL approach to teaching medical ethics to pharmacy students has been utilized as part of a pharmacy practice course. To our knowledge, this is the first time TBL is used in teaching ethics in a pharmacy curriculum. In this approach, most students' learning occurred out of the classroom during their preparation for the TBL sessions. Classroom time was invested in assessments, group interaction, application of concepts and finally clarification of misunderstood reading assignments. Students achieved an average score of 75% on their IRAT's which is comparable to their average score on the non-TBL portion of the course (74.8%). This represents both the achievement of student learning without the help of traditional lecturing by the faculty member, and learning without the additional impact of group interaction. The highest student achievement was in the GRAT scores (87.5%) which mostly reflects the effect of student interaction on reaching consensus answers matching the right answer than their individual responses. Group work reflected in the application scenario written reports was also associated with high achievement than individual work (80%). This is consistent with findings from other studies using TBL as an approach to teaching ethics to medical students (Chung *et al*., 2009). In their final examination, students achieved an average of 77.5% in their overall TBL assessments, this is higher than the average score achieved in the non-TBL portion of the course (74.8%) and the average IRAT scores (75%) but lower than group assignments of GRAT scores (87.5%) and the application exercises report scores (80%). It is clear that students performed better within their groups than individually in all assignments and in comparison to their performance in the non-TBL portion of the course. Students also scored better in all of their TBL than in non-TBL assignments except for the IRAT scores which represent individual student learning. A comparison between current grades and those of previous semesters for this course was not possible as it was taught by other faculty members, additionally, the course had gone through content modification this year and so rendering any comparison of grades to be invalid.

Student's evaluations of the TBL sessions were positive in most cases. Narrative evaluations of students' comments allowed for four themes to emerge. Many students praised the fact that team-building and interaction allowed them to know and work with other students in their class that they would've never talked to, they thought that listening to other people's point of view helped them "see" the other side of the story and helped them respect it and may be accept it. One specific issue that was seen positively by students was the fact that they could disagree with the majority of other team members in solving an ethical dilemma after offering their own justification in the same report submitted by the team. Another theme that was recognized by students was the effect of team learning on their retention of study material; students expressed how the sessions deepened their understanding of ethical principles and how communications with other students have increased their capability to solve ethical dilemmas, Many students commended on the idea that they assumed more responsibility in their learning and that all students were required to attend the sessions and contribute to discussions and assessments. Some, though, were critical of the amount and level of the reading material in the preparation

for the TBL sessions, this was expected as this was the first encounter of a TBL approach for this group of students. One last interesting theme was that most students wanted to see more TBL-run sessions applied within this course and within other courses in their program, this was an unexpected finding considering the challenges encountered in the preparation for the TBL sessions. A few students suggested that this TBL-conducted part of the course be moved to the beginning of the semester to allow for more time in preparation for the sessions, this was a recommendation to be taken in to consideration since the last session was conducted at the end of the semester when students were busy with many other course assessments and meeting other assignment deadlines. It is unknown whether student positive feedback of the TBL sessions in ethics learning was due to the fact that this is an interesting subject that lends itself to discussion, and that students had the chance to voice their point of view on ethical dilemmas within their groups and in front of class. It would be interesting to compare these students' feedback after a TBL session in other course modules that require less subjectivity and individual opinion especially that some students suggested this approach to learning be introduced in other parts of the course and may be other courses.

Since this was the first time this course was taught in this fashion, preparation of reading assignments such as handouts, text material and article-based readings was time consuming. Faculty interested in introducing this approach in their courses should be aware of this extra requirement and plan such assignments ahead of time. Students will need additional time studying their TBL assigned readings in comparison to the traditional after-lecture studying, hence, the requirement of an early availability of reading assignments. In our case we allowed for a two-week period between assigning reading material and the actual TBL session, most students agreed that this was the least reasonable timeframe needed to adequately prepare for the session. As to the workload of the faculty teaching the course, it still was taught by one faculty member and an assistant was available to help with grading and collecting assignments. There was no increase in faculty workload except for the additional time and effort required to redesign course objectives and the development of proper reading assignments. However, such new requirements should not be of much concern in subsequent offerings of the course. The actual contact time between the faculty member and the students stayed the same, however, this approach saved any additional time needed for assessments and quizzes. At the same time, it allowed for a more efficient utilization of student contact for group discussion of ethical dilemmas and the synthesis of sound judgment in resolving these dilemmas.

Limitations

The short implementation period of the course hinders any generalization of findings to the rest of the course or to other courses. Also, the success of utilizing a TBL approach in ethics education reported in this study could've been affected by the topic itself; ethics is an enjoyable subject to teach and learn in any format.

Challenges

Since this was the first time this strategy was used in administering the course, appropriate level of assigned readings was a time-consuming challenge to develop to a mostly-Arabic speaking class. Students have to pass the TOEFL exam as a requirement for admission in to the program but as one would expect, the English language used in ethics discussions would be at a higher level than in science -based texts for an example. Students had a high level of anxiety and concern over a new learning methodology but this was alleviated after an explanation of the objectives of using this method and after the first TBL session.

Conclusions

A TBL-approach has shown to benefit student performance in their assessments and to help in attaining skills of higher problem solving and application of knowledge. This was all achieved while students communicated with each other and interacted to reach their answers and possibly acquired team-working skills. Individual self accountability for learning has been enhanced and may lead to promoting self-development in the future pharmacy professionals.

Acknowledgements

The author would like to thank Miss Sally Fahmey for her effort in grading the quizzes and assignments and in managing students' grades for this portion of the course.

References

Chung, Eun-Kyung, Rhee Jung A. E., Baik, Young-Hong, Oh -Sun, A. (2009). The effect of team-based learning in medical ethics education. Med Teach, 31,1013-1017.

Conway, S. E., Johnson, J. L., Ripley, T. L. (2010). Integration of team-based learning strategies in to a cardiovascular module. Am J Pharm Educ, 74(2), Article 35.

Gettman, D. A., Arneson, D. (2003). Pharmacoethics: A problem-based approach. Boca Raton, FL: CRC Press.

Haidet, P., Richards, B., Morgan, R. O., Wristers, K., Moran, B. J. (2004). A controlled trial of active versus passive learing strategies in a large groups setting. Adv Health Sci Ed, 9(1), 15-27.

Hunt, D. P., Haidet, P., Coverdale, J. H., Richards, B. F. (2003). The effect of using team based learning in an evidence-based medicine course for medical students. Teach Learn Med, 15(2), 131-139.

Latif, D. A. (1999). Using ethical dilemma case studies to develop pharmacy students' moral reasoning. J. Pharm. Teach, 7, 51-66.

Latif, D. A. (2000). The relationship between ethical dilemma discussion and moral development. Am J Pharm Educ, 64, 126-133.

Letassy, N. A., Fugate, S. E., Medina, M. S., Stroup, J. S., Britton, M. L. (2008). Using team-based learning in an endocrine module taught across two campuses. Am J Pharm Educ, 72(5), Article 103.

McCarthy, R. L. (2008). Ethics and patient privacy. Pharmacy Today, 14(11), 59-70.

Michaelson, L. K. (2002). Team-based learning in large classes. In Michaelson, L. K, Knight, A. B., Fink, L. D., (eds). Team-based learning: a transformative use of

small groups (pp. 157-171). Westport, CT: Praeger.

Nieder, G. L., Parmelee, D. X., Stolfi, A., Hudes, P. D. (2005). Team-based learning in a medical gross anatomy and embryology course. Clin Anat, 18, 56-63.

Salek, S., Edgar, A. (2002). Pharmaceutical ethics. West Sussex, England: Wiley.

Self, D., Baldwin, D. Jr., Wolinsky, F. (1992). Evaluation of teaching medical ethics by an assessment of moral reasoning. Med Educ, 26, 178-84.

Self, D. J., Baldwin, D. C. Jr., Olivarez, M. (1993).Teaching medical ethics to first-year students while using film discussion to develop their moral reasoning. Acad. Med, 68, 383-385.

Self, D. J., Olivarez, M. & Baldwin, D. C. (1998). The amount of small-group case-study discussion needed to improve moral reasoning skills of medical students. Acad Med, 73(5), 521-523.

Smith, S., Fryer-Edwards, K., Diekema, D. S., Braddock, C. H. (2004). Finding effective strategies for teaching ethics: A comparison trial of two interventions. Acad Med, 79(3), 265-271.

Thompson, B. M., Schneider, V. F., Heidet, P., Levine, R., McMahon, K. K., Perkowski, L. C., Richards, B. F. (2007). Team-based learning at ten medical schools: two years later. Med Educ, 41, 250-257.

Veatch, R. M., Haddad, A. (2008). Case studies in pharmacy ethics. New York, NY: Oxford University Press.

Appendix 1. Examples of questions used in the RAP:

In the "Duty to Do Good and Avoid Harm" principle, a pharmacist is concerned with achieving:
- What's best for the patient overall well being.
- Best interventions that lead to optimum health
- Best interventions that are safe for the patient.
- Doing what exactly the patient wants.

Which of the following is CORRECT
- The Hippocratic oath actually prohibits health professionals from sharing any medical knowledge with patients.
- A consent always means that the patient is "informed" about the treatment.
- Under the notion of a voluntary consent, a patient may not refuse to a medical procedure if it's what's best for him/her.
- Incompetent patients are exempt from having to consent to a treatment as they themselves can't make decisions about these treatments.

Autonomy means that:
- A person is over the age of 18 years
- A person who is 16 but shows the signs of maturity
- A person who is capable of creating one's own legislation
- Being "totally" free from internal and external constraints.

Paternalism refers to:
- Constraint of those who are substantially autonomous in order to produce good for those individuals themselves.
- Decisions by parents acting as decision makers for their childrens' health.
- Constraint of those autonomous individuals to avoid harming other individuals in society
- Constraint of individuals in order to produce a greater good for society.

When it comes to decisions about receiving life-sustaining treatments which of the following is CORRECT:
- Both legal and most ethical theories consider the moral principle of autonomy to take priority over paternalism
- It is acceptable for the substantially autonomous patient to decline or withdraw their consent to a treatment only if the treatment is non-life-sustaining.
- The dominant view is that it is more morally acceptable to withhold life-sustaining treatments than to withdraw them.
- A life-sustaining treatment is a treatment that is part of letting nature take its place, will only care not cure the patient such as pain medications.

In the principle of "Avoidance of Killing", all of the following are correct EXCEPT:
- The act of killing or helping someone die is wrong even if the patient chooses and it's done in mercy.
- Rule consequentialists believe in prohibiting health care professionals from assisting in any killing of patients as this would produce better outcomes than any other rule.
- There is no difference between active killing or letting someone die naturally, it's always wrong to aide in the dying process.
- Most religions allow some form of assistance to help accelerate the dying process especially when it involves pain and suffering.

Breach of confidentiality happens when:
- An individual personal accesses information without the patient consent
- A health professional accesses a patient file
- An individual reveals medical information to others without the consent of the patient
- An individual accesses a customer's account information out of curiosity.

Appendix 2. Examples of case scenarios covered in the application exercises:

You are a student at a training hospital and your favorite television personality is a patient. You can't wait to tell your friends all about it…

Is there an ethical dilemma in telling your friends?

What sort of information would be "unethical" to discuss?

You have been offered a number of promotional materials from pharmaceutical companies including holiday trips and tickets to your favorite sports.

Does this pose an ethical dilemma?

3) You are employed to work in a pharmacy for the last 3 months. Several of your customers complain that they've been shorted 4-5 pills from the amount they are supposed to get this month, you found out the owner of your pharmacy is the responsible person.

What would you do?

4) On a busy day, a person brings in a script for a chemotherapeutic (anticancer) agent for a neighbor. He asks what the drug is for.

What do you tell him/her?

How do you approach counseling?

What if the patient asked the question?

5) You encourage your patients to be involved in a clinical trial on your ward. You have read the study and think it is worthwhile. In part of counseling patients about this study, you strongly encourage the patients to consent to take part in it. To "convince" them, you point out that everyone would be quite "disappointed if they did not take part" and "it might mean they had to wait longer to see the doctors if they weren't part of the study".

Any ethical issues here?

6) The family of a patient with Alzheimer's disease requested that their mother doesn't know about her condition as she won't be able to handle this diagnosis. The mother is at your pharmacy window and wants to talk to a pharmacist to ask about her medications. The son is busy with the doctor now…

What ethical dilemma are you faced with? How do you handle this situation?

7) A patient steps in your pharmacy to ask about the use of isotretinoin in the management of wrinkles as many of his friends are trying it and they report a much-better appearing skin after they started using it. Side effects of the medication include dry skin and increased sensitivity to light. For this purpose, insurance coverage is unlikely.

What would you tell the patient? Is the use of a medication for aesthetic purposes appropriate in this case?

8) You work in a public health clinic belonging to your national ministry of health. The clinic has just got a shipment of the flu vaccine, the flu has been a nasty season this year and many more people have signed to get the vaccine than there are doses in your clinic.

How do you distribute the vaccine amongst people signing up to receive it? Is there an ethical dilemma in defining which patients should receive the vaccine?

9) Your colleague is involved in a medication error that could've caused a major adverse event to a hospitalized patient. The error was discovered by the nurse attending to a patient, the patient didn't suffer any reactions and was dismissed as planned by the physician.

Are you obliged to report a medication error even if there was no harm? Will you report a colleague friend?

10) A patient is admitted to the hospital for renal and cardiac exacerbations of her systemic lupus erythematosus. She is 10 weeks pregnant, the doctor needs your help in dispensing medications that could induce uterine contractions and hence abort the fetus.

What are your views on the medical management of the condition? Your willingness to dispense such medications?