

## > Statement of Objectives

After reading this lesson you will be able to:

1. Describe the factors affecting compliance in pediatrics
2. List scenarios where measuring devices may be appropriate
3. Describe strategies for masking the taste of medications
4. List different techniques or tools to assist in counselling young children
5. Describe the challenges of communicating with adolescent patients and strategies to overcome them



# COUNSELLING PEDIATRIC PATIENTS

by Patricia Gerber, BSc(Pharm), PharmD

## > Instructions

1. After carefully reading this lesson, study each question and select the one answer you believe to be correct. Circle the appropriate letter on the attached reply card.
2. Complete the card and mail, or fax to (416) 764-3937.
3. Your reply card will be marked and you will be advised of your results in a letter from Rogers Publishing.
4. To pass this lesson, a grade of 70% (14 out of 20) is required. If you pass, your CEU(s) will be recorded with the relevant provincial authority(ies).  
(Note: some provinces require individual pharmacists to notify them.)



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### INTRODUCTION

MEDICATIONS ARE A CRITICAL FACTOR IN THE management of many childhood diseases. The literature strongly verifies that medication non-compliance is a significant issue not only for adults, but also for children. When treating children, the problem of compliance is compounded by the fact that patient and parent(s) must coordinate efforts to follow the medication regimen: acceptance by and cooperation of both child and parent are required. This lesson will discuss counselling issues in pediatrics and how age can present a barrier to compliance.

### COMPLIANCE IN PEDIATRICS

THE RATE OF MEDICATION USE IN PEDIATRICS IS not as high as in adults. However, the increasing availability of self-administered treatments for children (e.g., cough and cold products, and analgesics), the complexity of some prescribed therapies, and the assumption that compliance leads to positive health outcomes, result in a need for understanding and managing non-compliance in this population. Frequency and ease of drug administra-

tion and adverse effects have been shown to affect compliance in adult patients. For pediatric patients, additional medication-specific factors such as dosage form and taste can play a significant role in compliance.

Although there is little evidence that non-compliance is disease-specific, the literature on pediatric compliance involves mainly children post-transplant, those with asthma, cancer or epilepsy. This is largely due to the nature of these diseases and the chronic need for numerous medications of different dosages and forms, several times throughout the day.

Reported rates of non-compliance in pediatric patients with chronic diseases vary between 11 and 93%.<sup>1</sup> Even pediatric cancer therapies, which today are mainly curative rather than palliative, have been associated with non-compliance rates as high as 60%.<sup>1</sup>

Although the rates of compliance are generally assumed to be better for acute disease than for chronic diseases, studies have shown that even with a 7- to 10-day course of oral antibiotics for young children, the rate of compliance can be as

low as 5 to 8%.<sup>2</sup>

Despite the lack of agreement in the pediatric literature as to which factors are directly correlated with non-compliance, a number of issues have been suggested to potentially hinder compliance. These can be grouped into 5 main categories:

#### **Child-related factors**

The responsibility of compliance with a drug regimen for a pediatric patient almost always falls upon the family/caregivers. There are, however, child-specific issues which may contribute to non-compliance. The age of the child, for example, can greatly affect compliance because a young child will have less say in his/her own therapy compared to a teenager. Not only does their level of understanding change dramatically as the child grows, but also their perceptions and beliefs become more apparent. Parallel to their growth and development, there may be pharmacokinetic changes which lead to inappropriate suspicions of non-compliance.<sup>3</sup> For example, if a teenager's asthma has been well controlled on theophylline for years, yet suddenly upon an acute asthma exacerbation, a blood level reveals a sub-therapeutic concentration, one may assume it is due to non-compliance and overlook the possibility of changes in the kinetics of theophylline as a result of puberty.

Age also plays a role in pediatric non-compliance as a result of the cognitive development that takes place as the child grows. In a study of asthmatic children aged 8 to 16 years, McQuaid et al found

that age was associated with increased child knowledge of the disease, but not with improved compliance.<sup>4</sup> The authors speculated that teenagers may be less able and motivated to manage their disease despite their knowledge of the disease. They may also begin to "test" the efficacy of the medications by cutting down or altering the prescribed regimen. Tebbi noted that adolescents who are allowed more autonomy displayed better compliance with their therapies.<sup>1</sup> The author proposed that a sense of personal control over their own health may be an important factor in achieving compliance amongst teenagers. However, it is possible that a parent's desire to maintain control of the child's therapy may conflict with the older child's desire to develop independence and competence.

#### **Family, cultural, ethnic and social factors**

Studies have emphasized the role that interpersonal relationships in the family play in achieving compliance with pediatric therapies. Hauser et al and Chaney et al noted family conflict to be a predictor of poor self-management in adolescents with diabetes and juvenile rheumatoid arthritis, respectively.<sup>5,6</sup> The importance of family harmony was also stressed by Wamboldt et al, whose study found that family conflict and parental criticism were associated with poor compliance among adolescents with chronic asthma.<sup>7</sup>

Although a relationship between family support or general family cohesion

and compliance has been noted for some pediatric conditions, studies on pediatric rheumatoid arthritis have both agreed with and refuted the link.<sup>8</sup> Similarly, paternal emotional support offered to post-renal transplant children was negatively associated with compliance.<sup>9</sup> Thus, there is no clear understanding of whether open family communication and support help families of chronically-ill children to resolve factors that make compliance problematic. One can postulate that general family anxiety and stress may contribute to the problem of non-compliance, as shown by Tebbi in a study of children with cancer, where an inverse relationship was found between the number of siblings and compliance.<sup>1</sup>

Lack of awareness of ethnic and cultural issues may contribute to non-compliance. In a study by Tucker et al, predictors of compliance differed among African-American and Caucasian families of children post-renal transplant.<sup>10</sup> Offering encouragement to African-American children helped them to remember to take their medications regularly, whereas providing reminders was what encouraged compliance in Caucasian families.<sup>10</sup> Although no clear explanation exists for the association between ethnic minority and non-compliance, access to health care and communication between health-care providers and patients may play a role.<sup>11</sup>

How families view a chronic illness in a child also plays a role in compliance. Anderson et al showed that, for Caucasian families, one of their main

## **FACULTY** COUNSELLING PEDIATRIC PATIENTS

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focuses was the need to view their child as “normal.”<sup>12</sup> On the other hand, Chinese families placed more emphasis on the child’s protection and happiness and coping with the limitations placed on the child. Thus, when pharmacists ask families to comply with regimens, they may be requesting something that is unfamiliar to them and may not be of the greatest importance in their culture.

The influence of society on families’ everyday lives can affect compliance. Reddington et al interviewed caregivers of HIV-infected children about their experiences with HIV medications and found that non-compliant families were less likely to have informed the school or day-care administration about the children’s disease for fear of teachers or friends finding out about their children’s disease.<sup>13</sup>

#### **Disease factors**

The type and severity of the disease may influence pediatric compliance.<sup>14</sup> For chronic diseases such as asthma, parents may find it difficult to comply with therapies which, as a result of misinformation, may be associated with incorrect perceptions. For example, corticosteroids, may be mistaken by families as being synonymous with anabolic steroids. In addition, for diseases that wax and wane over time, such as asthma, parents may be more inclined to comply with their children’s therapies during times when the disease flares up, but not during the “well” times. During “well” times, parents may believe that their children no longer need to continue their therapies, thereby establishing a pattern of non-compliance.

Similarly, compliance may be fragile when chronic therapy is required as prophylaxis. Elliot et al found that only 12% of mothers of children with sickle cell disease complied with obtaining the prescribed 2-week refills of prophylactic penicillin for prevention of pneumococcal infections.<sup>15</sup> It has been suggested that if the child is asymptomatic, there is a less than 50% chance that a full course of treatment will be completed.<sup>16</sup>

#### **Drug regimen factors**

Despite common belief, disagreement exists in the literature as to which, and to what extent, drug regimen factors affect pediatric compliance. Didlake et al were unable to show a relationship between the number of daily doses of a pediatric medication and compliance,<sup>17</sup> whereas Eisen et al found that compliance increased from 59% with three-times a day dosing to 83.3% with once-daily dosing.<sup>18</sup> Similarly, Cramer et al noted that compliance in patients receiving anti-seizure medications was: 87, 81, 77 and 39% with the once-, twice-, three-times-, and four-times daily dosing respectively.<sup>19</sup> Regardless of whether or not a relationship exists between number of doses per day and compliance, one could argue that taking medications several times a day is an unpleasant task for any child.

More agreement appears to exist as to the effect that duration of therapy and the number of medications taken by the child have on compliance. Tebbi studied children with cancer and noted a decline in compliance from 81.2% at 2 weeks to 60.5% at 20 weeks after the diagnosis.<sup>1</sup> Meyers et al studied children post-renal transplant and, upon reviewing characteristics of the study groups, noted that the total number of medications taken by the children in the compliant group was lower than that of the children in the non-compliant group.<sup>20</sup>

Studies have both agreed and refuted the belief that compliance is better in pediatric patients and families who report fewer and/or less severe side effects.<sup>1,20</sup> However, we must take note that the incidence or nature of a side effect may be the reason for non-compliance in some pediatric patients. Smith et al found side effects to be the reason for non-compliance in 4 to 12% of the asthmatic children studied.<sup>21</sup>

#### **Health-care professional factors**

The quality of the relationship between the family and the physician may influence compliance.<sup>14</sup> Studies have shown that a complex process of scheduling

physician appointments, perceived lack of physician interest, and a visit perceived as rushed, have all been linked to poor compliance in pediatrics.<sup>3</sup> Likewise, as pharmacists’ roles evolve to include consulting on patient therapies, we can learn from the literature on physician-family relationships and consider the importance of appointment scheduling and avoiding rushed sessions.

### **STRATEGIES FOR IMPROVING COMPLIANCE**

A SIGNIFICANT NUMBER OF MEDICATIONS PRESCRIBED for children are available as oral liquids and much can be found in the literature as to the types of measuring devices that exist to ease their administration. Most frequently, oral syringes, droppers, spoons and medicine cups are used.<sup>22</sup> Oral syringes, although useful for the very young, may discourage some toddlers who may view them as more “invasive” than a spoon or medicine cup. The disadvantage of a medicine cup is that it does not accurately measure volumes smaller than 15 mL.<sup>22</sup> Droppers can be used to measure volumes of 5 mL or less and are particularly useful in dosing infants. Parents should be discouraged from using kitchen spoons as measuring devices due to their inaccuracy. Likewise, medications should not be added to infant bottles to avoid the risk of incomplete dosage intake. Newer and, in certain cases, more practical devices include the Medibottle, which is a baby bottle that allows for the placement of an oral syringe, and Adapt-A-Cap, which is used to replace the cap of a traditional liquid medicine bottle and allows for an oral syringe to be inserted. Before recommending any of these, however, the pharmacist must consider whether the medication is compatible with the contents of the bottle (e.g., milk).

The taste of medications is just as important as the delivery device employed. Because the sense of taste is more developed in children than adults, their acceptance of the medication is critical.<sup>22</sup> When asked about interventions to

improve compliance, having access to better-tasting medications was one of the most common responses given by caregivers of HIV-infected children.<sup>13</sup> When an antibiotic is to be recommended, the pharmacist may be able to select one which is commercially available as a good-tasting formulation (e.g., cephalexin liquid may replace cloxacillin liquid for an infection such as cellulitis). Otherwise, several strategies have been suggested to help mask the taste of medications:

- Refrigerate the liquid medicine to render it less aromatic and flavourful. Ensure that the medication is stable when refrigerated.
- Mix the medication in a small amount of strong-flavoured food such as jam or apple sauce, or give the child a small taste of a strong-flavoured food before and after the medication. Ensure that the medication is compatible with the food if they are to be mixed.
- Numb the taste buds with a small iced treat.
- For bitter-tasting tablets, consider the stability of the drug in a good-tasting liquid, simple syrup, or mixed with a flavouring agent. Consult references or the local pediatric hospital or compounding pharmacy for information on compounding a pediatric solution, its stability and storage requirements.

Since a large volume of medication may contribute to a child's unwillingness to take it and the risk of incomplete dosage intake, when available in more than one concentration, the more concentrated solution should be considered. Involving the family in the decision of whether to dispense a tablet or liquid, and what delivery device to use, can make the difference between compliance and non-compliance.

Many children have trouble swallowing medications for reasons other than age-appropriate coordination. For example, children with developmental delay may have a compromised ability to swallow even a mouthful of water without it dripping out. Swallowing may also be an emotional issue. Children sometimes

associate a medication with frightening sickness and may gag. In some situations, these difficulties may result from a control struggle, perhaps in an environment of family conflict. Partnering with the family can help the pharmacist provide advice on how to minimize these problems.

It has been suggested that exposing the family to a large amount of information at once is less likely to be effective.<sup>23</sup> The caregivers of HIV-infected children interviewed by Reddington et al, stated that compliance would improve if the health-care professional was resourceful and increased telephone contact with the family.<sup>13</sup> Frequent contact with the family also allows the opportunity to discuss various issues, such as establishing goals together, simplifying treatment plans, and minimizing barriers to compliance. By understanding the needs of each particular family, the pharmacist may be able to suggest ways to coordinate dosing times with the child's activities such as meal times, teeth brushing, etc. Finally, the pharmacist must ensure the parents understand what, at times, may seem obvious. For example, volume equivalents such as "cc" and "mL", or the fact that many antibiotics that are to be administered at "night-time" may be given at the child's bedtime, without the need to wake the child.

A variety of tools to improve compliance are available. These include memory aids, calendars, charts, alarms and dosette packaging devices. Newer and fancier devices such as the Doser CT (which attaches to the top of an inhaler and monitors usage) or ALRT Med Reminders, which allow for remote monitoring, are becoming available on the market. For teenagers who require reminders, carrying a small pager-like alarm may be considered in some cases to be discrete enough and socially acceptable. In other cases, these alarms may be another reminder that they are "different." The pharmacist should discuss the advantages and disadvantages of the various products available and allow the child and/or family to

decide whether it would aid their compliance. For families of multiple caregivers (e.g., parents, grandparents, babysitter, etc.), a simple calendar may be a helpful tool to remind the caregiver to administer the medication to the child, and to prevent other caregivers from inadvertently repeating the dose. The pharmacist can design a simple calendar for the caregiver to place a "tick" each time a dose is given. Alternatively, the pharmacist may choose to print out a list of the child's medications and corresponding administration times (e.g., many pharmacy computer systems allow for the printing of a patient's Medication Administration Record, or MAR, which could serve as a useful reminder for the caregiver).

#### COMMUNICATING WITH CHILDREN

WHEN COUNSELLING FAMILIES ABOUT children's medications, it is important to consider when and how to involve the child. In a report of pharmacists' perceptions of children as consumers of medications, 32% of pharmacists reported that they communicated directly with children only some of the time, and 35% stated that they did so rarely.<sup>24</sup> Involving the child in the counselling process may help identify concerns or fears that the child has. In many cases, relying solely on the parental report may give a misleading picture of the effects on the child.<sup>25</sup> Research shows that children do want to know about the medicines they take.<sup>26</sup> In a report on feedback from children about health-care, The British Commission for Health Improvement revealed that children complained of health-care providers explaining things only to their parents.<sup>27</sup> Children want to be involved, informed, and consulted when it comes to managing their disease.

Another consideration is that children's views about illness and the complexity of their thinking vary with their level of cognitive development. To illustrate the importance of adapting the way we present information to children of various age groups, Anderson conducted a study in which children were asked what causes

asthma.<sup>12</sup> A young child explained "...you get sick a lot and you have to go to hospital" whereas an older child explained it as "asthma is caused by a tightening of the ligaments around the bronchi which causes air to get caught in the lungs."

Until the age of 2 years, a child has little ability to connect to objects outside of the self.<sup>24</sup> However, from that age until 7 years, children can be educated about certain aspects of their medications. For instance, a 6-year-old child with cystic fibrosis is very capable of understanding the need to take pancreatic enzymes prior to eating. An easy way to begin the discussion and show interest in the child is by commenting on what the child may be holding in his/her hand (e.g., a toy), the print on their T-Shirt, or by simply asking the child about his/her favourite pastimes. The pharmacist can educate a child in this age group about why a particular medication is important, the concept of side effects, and the fact that the effect of a drug is not associated with its taste or colour.<sup>24</sup> Once past the age of 7, children can understand the concept of disease prevention and other complex issues such as how drugs work and where drugs "go" in the body.<sup>24</sup> At this age, the pharmacist may encourage autonomy by giving the child a calendar to mark when a dose is taken. Here are other suggestions for communicating with young children.

- Use open-ended questions to determine the child's cognitive level.
- Be aware of facial expressions, gestures, and tone of voice.
- Avoid medical jargon.
- Introduce medical and technical terms progressively; consider counselling as an on-going effort.
- Use words with few syllables and short sentences. Young children can deal with 2 to 3 messages, whereas older children can retain 7 to 14 messages.<sup>28</sup>
- Use a mixture of text and illustration.
- For children with chronic illnesses such as asthma, refer the parent to the local library or chapter of the Canadian Lung Association for educational materials.

When counselling children, pharma-

cists need to consider adolescents separately. At this age, teens begin to gain responsibility for the management of their disease and may begin to visit their physicians or pharmacists alone. When dealing with adolescents, the pharmacist can discuss more complex topics such as drug interactions. Adolescents are also more curious about how drugs work. However, the manner in which the pharmacist communicates with adolescents is key. Van Es et al conducted focus groups of teenagers with asthma, who gave recommendations for the development of patient education materials.<sup>29</sup> They suggested drawings to illustrate how a medication works or what their disease involves. In developing a booklet on alcohol and illicit drugs designed for youth, Collin et al gained insight into what constitutes youth-friendly materials via focus groups with adolescents.<sup>30</sup> These youth recommended "Don't talk at me, talk with me;" "Keep it simple and to the point;" "I want to know what I am taking before I choose to take it...list all the side effects."

The adolescent subjects of Van Es' focus groups admitted that when their normal routine was interrupted, remembering to take medications became difficult. For example, "...First I clean my teeth, then I take my medicine...then I don't forget it...but often I know it's there. It's on my desk." The pharmacist should remember that compliance in adolescence is tightly linked to daily routine and should make appropriate suggestions.<sup>29</sup>

Another challenge in counselling adolescents may be determining whether a teen is compliant with a therapy. Most participants of the focus groups mentioned above stated that they did not dare to tell the physician the truth about whether they were truly taking their medications for fear that the pediatrician would tell their parents.<sup>29</sup> Pharmacists need to ask open-ended questions such as "which doses do you most often forget to take?" as opposed to "do you ever forget to take a dose?"

Even while considering the issues and recommendations discussed so far, the pharmacist may still encounter a subgroup of pediatric patients for whom compliance and/or communication may be particularly difficult. In these situations, it is important to ensure "buy-in" from the child by focusing all efforts on establishing a trusting pharmacist-child relationship. The pharmacist may need to be creative and resourceful to successfully manage a challenging child. The practice of pharmacy requires much more than medication knowledge and analytical skills; it requires wise problem-solvers.

## SUMMARY

NON-COMPLIANCE WITH MEDICATIONS IS AN important issue for pediatric patients. To ensure compliance, the pharmacist must optimize a child's drug therapy regimen by partnering with the family to identify barriers to compliance, provide education on the importance of compliance, provide strategies to help children take their medications, and provide on-going support and assistance. By involving the child in this process, the pharmacist must communicate in an age-appropriate manner, utilizing appropriate aids when necessary.

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## QUESTIONS

**1. When counselling pediatric patients, the pharmacist must be aware that:**

- a) Chronic complex therapy with medications is commonly required in pediatrics
- b) In pediatrics, the problem of non-compliance is complex because it involves child and caregiver issues
- c) The model that supports two-way exchange of information between patient and pharmacist is not applicable to pediatrics because pharmacists cannot involve children in the counselling process
- d) Both a and b

**2. Which patient is most likely to be non-compliant?**

- a) A 2-month-old girl with gastric reflux who needs ranitidine twice daily
- b) A 6-month-old boy with a seizure disorder who needs carbamazepine three times a day
- c) A 3-year-old boy with cellulitis who has been prescribed liquid cloxacillin to be given four times a day
- d) A 16-year-old girl with exercise-induced asthma who takes salbutamol inhaler prior to exercising

**CASE STUDY #1**

J.J. is an asthmatic 4-year-old boy. Since the age of 4, he has been tried on liquid ketotifen (5 mL bid), inhaled sodium cromoglycate (2 puffs qid), and inhaled beclomethasone (1 puff bid). He

was most recently started on a regimen of inhaled budesonide (1 puff bid) and inhaled salbutamol (PRN), with promising results. He lives at home with his mother and 3-year-old sister. While his mother works throughout the day, he attends pre-school in the morning and is cared for by his grandmother in the afternoon.

**3. Which statement is CORRECT?**

- a) In pediatrics, as in adults, the rate of medication use is high.
- b) Compliance in pediatrics is an important issue that can alter treatment outcome.
- c) In pediatrics, the most common pattern of non-compliance is the child

receiving half the prescribed drug.

d) Pediatric literature strongly supports the fact that non-compliance in pediatrics is disease-specific.

**4. Which statement best explains the reason(s) why J.J. may be at risk of non-compliance with his asthma medications?**

- a) He suffers from a chronic disease.
- b) He is at an age when children begin to "rebel" against taking medications.
- c) He is cared for by more than one individual during the day.
- d) Both a and c.

**5. In terms of the specific medications that J.J. has previously received and is currently receiving, which statement is CORRECT?**

- a) The pharmacist who dispensed his ketotifen liquid in the past should have instructed the caregiver how to dose a medicine cup.
- b) The pharmacist who dispensed his current inhaled budesonide should involve him in the counselling process.
- c) Given his young age, there is no need for the pharmacist to ask J.J. to demonstrate his inhaler technique.
- d) Given his young age, J.J. is unlikely to understand the concept of taking a medication "as needed for your symptoms" (i.e., PRN).

**6. J.J. and his mother come into the pharmacy for a refill of his medications. Which statement is most appropriate to ensure J.J.'s participation in the discussion?**

- a) "J.J., do you know by now that you have a disease called asthma?"
- b) "What's that you are holding in your hand? Can I see it?"
- c) "Are you good at using your puffers?"
- d) "J.J., looks like you need more medications for your asthma today."

**7. When counselling J.J. and his caregiver on his medications, the pharmacist should**

- a) Use a drawing or a picture to explain how the respiratory system works
- b) Review, in a 45-minute session, all about asthma, how these medications work, and all the possible side effects
- c) Tell J.J. that medications could be dangerous and therefore it is not wise for him to get involved in his therapy
- d) Explain to the caregiver that J.J. is likely to be non-compliant because of the difficulties and stresses in the home environment

**CASE STUDY # 2**

Mrs. Smith has a new prescription for a 10-day course of amoxicillin 125 mg/5 mL suspension three times daily for her 10-month-old daughter P.K.'s otitis media infection. Mrs. Smith has a history of non-compliance with her own chronic medications.

**8. Which statement is CORRECT?**

- a) Due to Mrs. Smith's past history of non-compliance, the pharmacist has a small chance of establishing compliance with P.K.'s antibiotic regimen.
- b) Even if Mrs. Smith has a history of being non-compliant, she will likely comply with P.K.'s regimen because it is only 10-days long.
- c) The pharmacist needs to recognize that in order to improve Mrs. Smith's compliance, he/she will have to demonstrate enthusiasm, commitment and availability on an on-going basis.
- d) P.K. is too young to refuse her amoxicillin due to its taste.

**9. In order to ensure that P.K. receives her amoxicillin regimen correctly, the pharmacist could**

- a) Suggest adding each dose of amoxicillin to P.K.'s milk bottle.
- b) Advise Mrs. Smith to give P.K. some peanut butter just prior to each dose to mask the taste of amoxicillin.
- c) Suggest to the physician that the more concentrated suspension (250 mg/5 mL) be used, to minimize the volume of liquid that P.K. will need to take with each dose.

d) Advise Mrs. Smith to give each dose at times when P.K. is somewhat sleepy so that P.K. is not too aware of what is happening.

**10. Which set of instructions would be least likely to cause Mrs. Smith to be noncompliant with P.K.'s medication?**

- a) "Use a small kitchen teaspoon, measure 1 full teaspoonful and give it to P.K. three times per day."
- b) "Here is an oral syringe to measure each dose. I have used a pen to mark the line of the syringe up to which you need to draw the liquid."
- c) "If P.K. doesn't seem to want to take the medication, try dividing the regimen into 4 smaller doses spaced throughout the day."
- d) "Here is a medicine cup to help you measure the correct amount of liquid."

**11. Concerned about P.K.'s dislikes, Mrs. Smith asks the pharmacist with what types of liquids she could mix each dose of amoxicillin. The pharmacist should**

- a) Recommend mixing it with P.K.'s favourite drink.
- b) Educate Mrs. Smith on the issue of stability and discourage her from mixing it with other liquids.
- c) Explain that as long as the amoxicillin bottle is kept in the fridge, any type of liquid can be used.
- d) Suggest that dispensing capsules and administering them with a tablespoonful of a soft food, such as apple sauce, may be an option.

**12. Mrs. Smith is at risk of not complying with P.K.'s full 10-day regimen of amoxicillin because**

- a) P.K. is likely to be asymptomatic by day 5 of therapy.
- b) P.K. may experience diarrhea as a side effect.
- c) The physician visit (where she obtained the prescription) required a long wait and was rushed.
- d) All of the above.

**CASE STUDY #3**

M.G. is a shy 14-year-old girl recently diagnosed with depression and concerned about her peers finding out about her depression. She and her mother come into the pharmacy with a new prescription for an antidepressant (she was tried on one in the past but it was discontinued due to lack of effect).

**13. Which statement should the pharmacist open the discussion with?**

- a) "This medication needs to be taken regularly for a few weeks before you begin to feel better."
- b) "Do you prefer that we discuss this medication alone or with your mother present?"
- c) "Do you feel that your symptoms of depression are severe enough to need an antidepressant, given the possible side effects?"
- d) "Have you heard anything in the media recently about the use of antidepressants?"

**14. To ensure that M.G. complies with her antidepressant regimen, the pharmacist could suggest**

- a) Ways to incorporate medication-taking into M.G.'s daily routine, for example taking it every day just after brushing her teeth.
- b) That M.G. carry a compliance aid such as a pager-like alarm, which her peers may find interesting.
- c) Being open with her close peers and discussing her depression with them.
- d) Joining a community support group for teens with depression.

**15. M.G. is interested in obtaining some more information about depression. The pharmacist could**

- a) Suggest obtaining a video from the local library.
- b) Offer M.G. a photocopy of the chapter on depression from a pharmacy textbook.
- c) Give her a written pamphlet on

depression which explains the disease and how antidepressants work using illustrations.

d) Both a and c.

**16. Which measure would lessen the effectiveness of the counselling session with M.G.?**

- a) Engaging in a long discussion, despite the fact that many other patients are waiting in line for the pharmacist.
- b) Offering M.G. a brief yet informative discussion in conjunction with written material.
- c) Obtaining her permission to follow-up on the discussion by calling her within 1 week.
- d) Inviting her to return to the pharmacy at a time when there are fewer patients around in order to continue the discussion more privately.

**17. In order to encourage M.G. to comply with her medication, the pharmacist should**

- a) Show interest in M.G.'s disease and therapy.
- b) Ensure he/she comes across as an "authoritative" figure.
- c) Direct all efforts towards educating M.G.'s mother, who is ultimately responsible for M.G.'s well-being.
- d) Use strong statements and explain possible negative outcomes such as suicide to encourage M.G. to adhere with her therapy.

**18. Which is an appropriate question to ask M.G. to determine whether she is likely to comply with the therapy?**

- a) When you were tried on an antidepressant in the past, did you ever forget to take a dose?
- b) When you were tried on an antidepressant in the past, how many doses would you say you would typically forget to take in one week?
- c) In the past, why were you not able to comply with your therapy? Was it

because of side effects?

d) Do you understand the importance of taking this medication every day?

**CASE STUDY #4**

K.L. is an 8-year-old boy who comes into the pharmacy with his father, with a prescription for ondansetron for nausea and vomiting and co-trimoxazole for the prevention of pneumonia. They are a family with limited English and of visible minority.

**19. Which statement is CORRECT?**

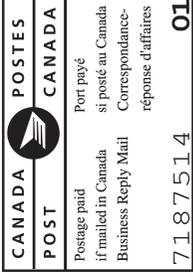
- a) The pharmacist should not consider this family any different from others and should provide the same education in a similar manner as for any other family.
- b) Culture and ethnicity may play a role in pediatric compliance.
- c) The pharmacist can safely assume that this family will want to have information about all the potential side effects of their children's medications.
- d) It would be prudent for the pharmacist to assume that this family may be candidates for non-compliance.

**20. The pharmacist becomes aware that K.L.'s first language is Korean, and that he was recently discharged from the hospital after a chemotherapy regimen for his leukemia. Which is the most appropriate course of action for the pharmacist?**

- a) Be mindful that comfort and happiness rather than "normalization" of the child may be the family's priority for K.L.'s life.
- b) Ask K.L. what he has been told about his prognosis.
- c) Knowing that one of the other pharmacists who works in that store speaks fluent Korean and will be available the following day, ask K.L. and his father whether they would be more comfortable discussing the medications with the other pharmacist the following day.
- d) Both a and c.

**Missed something?**

Previous issues of CE Compliance Centre are available at [www.pharmacyconnects.com](http://www.pharmacyconnects.com) and [www.novopharm.com](http://www.novopharm.com).



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|   |  | <input type="checkbox"/> Part-time employee |
|   |  | Year Graduated _____                        |

**Feedback on this CE lesson**

- Do you now better understand how to counsel pediatric patients?  Yes  No
- Was the information in this lesson relevant to your practice?  Yes  No
- Will you be able to incorporate the information from this lesson into your practice?  Yes  No
- Was the information in this lesson...  Too basic     Appropriate     Too Difficult
- Do you feel this lesson met its stated learning objectives?  Yes  No
- What topic would you like to see covered in a future issue? \_\_\_\_\_

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