

Description and Assessment of an Early Curriculum to Teach Pharmacy Students Caring Behaviours

KIMBERLY A. GALT^{a,*} and RONALD MARKERT^b

^aDrug Information and Center for Practice Improvement and Outcomes Research, School of Pharmacy and Allied Health Professions, Creighton University, 2500 California Plaza, Boyne Room 141, Omaha, NE 68178, USA; ^bCenter for Medical Education, School of Medicine, Creighton University, 2500 California Plaza, Boyne Room 141, Omaha, NE 68178, USA

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This work describes the effectiveness of a curriculum on first semester, first professional year pharmacy students' ability to identify and demonstrate professionally specific caring behaviours. A one group, pre-post, quasi-experimental design was used to evaluate the application skills of students when provided patient case situations through use of a Professional Caring Behaviour Survey (PCBS). The PCBS was administered at baseline and at course end. An improvement in mean score from 24.65 to 27.54 was observed ($t = 7.768$; $p < 0.001$). The instrument was also administered to second, third and fourth year pharmacy students who had not received this learning design. The mean scores achieved for each academic cohort year (1st = 24.68, 2nd = 24.96, 3rd = 24.26, 4th = 24.31) were not significantly different (one-way ANOVA: $p = 0.551$; reliability = 0.71). This work suggests that explicit teaching of caring behaviours is necessary if we expect students to recognise and consider these behaviours as preferred when progressing through their professional education program.

Keywords: Behaviour; Caring; Curriculum; Educational assessment; Pharmacy

INTRODUCTION

Despite substantial evidence throughout the health professions that demonstrates we teach the *concept* of caring about patients, there is little evidence that this has affected the actions of health professionals or improved the health of patients (Gordon, 1978; Watson, 1979; Leininger, 1981; Gaut, 1986; Papers of the Commission to Implement Change in Pharmaceutical Education, 1993; Knight, 1995; Heppler, 1996; Layman, 1996; Mahowald, 1996; Reich, 1996;

Wallace, 1997; Allmark, 1998; Gramling and Nugent, 1998; Puchalski and Larson, 1998; Stern, 1998; Branch, 2000). However, a limited body of research has demonstrated that when discipline specific caring behaviours are incorporated into professional practice, measurable improvements in the health outcomes of patients have been observed (Duffy, 1992; Nash *et al.*, 2000). Review of the educational literature suggests that concept teaching is necessary but not sufficient to achieve the desired behaviours associated with concepts. Desired behaviours must be identified, articulated, and overtly taught in order to expect students to learn what is most desirable and correct, and to subsequently identify and perform them. Behaviours must be specifically identified in order to be measurable or assessable.

An initial set of caring behaviours of pharmacists has previously been described (Galt, 2000). The definition of caring adopted here refers to the direct (or indirect) nurturant and skillful activities, processes, and decisions related to assisting people in such a manner that reflects behavioural attributes which are empathetic, supportive, compassionate, protective, helpful, educational, and others, dependent upon the needs, problems, values, and goals of the individual or group being assisted (Leininger, 1981). Caring is expressing attitudes and actions of concern for patients in order to support their well-being, alleviate undue discomforts, and meet obvious or anticipated needs. Within this defined concept of care, we act using behavioural attributes that are dependent on the needs, problems, and goals of the individual.

*Corresponding author. E-mail: kgalt@creighton.edu

Professional care refers to those cognitive and culturally learned behaviours, techniques and processes, or patterns that enable (or help) an individual, family, or community to improve or maintain a favourable healthy condition or way of life (Leininger, 1978). The profession of pharmacy has been called to provide care at the highest level of responsibility and integrity. This requires that pharmacists be advocates for patients in all aspects of their health care needs (Galt, 2000). Students practice professional care when learning design heightens their commitment to values-based teaching and attitude development (Commission to Implement Change in Pharmaceutical Education, 1993a,b). Tutors must teach the affective domain within a values-based context (Krathwohl *et al.*, 1964). Content and values must be explicitly defined and taught in order to form attitudes that translate into the most desired behaviour. When students learn the desired caring values and the content is understood in the context of these values, then the desired behaviours may be articulated clearly and described completely. It then becomes possible to teach, as a standard in all schools, case-specific caring behaviours and performance based assessment of caring behaviours is possible. Prior work suggests that Watson's caring values model can be adapted to pharmacy and that an initial set of caring behaviours can be accepted by pharmacy educators as an initial starting point for this transformation (Watson, 1979; Galt, 2000).

PURPOSE

A curriculum was developed to teach first year Doctor of Pharmacy students professionally specific caring-based values, attitudes and behaviours. The purpose of this work is to describe the curriculum and to assess the effectiveness of the curriculum on student ability to critically evaluate patient cases and select the most desired caring behaviours of pharmacists. A three-week curricular module was developed and taught as part of a first semester, first professional year Doctor of Pharmacy course entitled "Foundations in Pharmaceutical Care".

COURSE DESCRIPTION

The course is an introduction to pharmaceutical care, the primary model for the pharmacists' systematic patient practice, and the supporting skills framework needed to provide this practice. Formation of the concept and behaviours of a pharmacist's practice is emphasised by teaching basic informational, clinical and behavioural skills from both a conceptual and practical context. Substantial emphasis is

placed on developing attitudes needed to develop competence in these areas. This course complements other skill application courses, including "Communications" and "Early Pharmaceutical Care Experience".

Three modules were created using an instructional design approach: Module 1 "Drug Information Skills of Pharmacists", Module 2 "Therapeutic Care Planning Skills of Pharmacists", and Module 3 "Caring Behaviours of Pharmacists". The specific learning objectives are described in Table I. Mini-lectures of 10–12 min in duration, small group case-based problems in class, self-study, and active exercises outside of scheduled class are learning techniques employed in the course. Students use role-play and experience case-based approaches to learn the basic skills required for patient-specific care recommendations. Performance-based peer evaluation checklists, in-class journal, mind-mapping of concepts, in-class polling and continuous feedback solicitation in-class are assessment techniques used by instructors. The final grade combines quizzes (20%), assignments (50%) and the final examination (30%). Specific required readings, videos and electronic resources are used for each session as appropriate.

DESCRIPTION OF THE CARING MODULE

Table II shows the curriculum map for the module. The module was constructed by identifying the enabling objectives that support the primary learning objectives for the module (see Table I). The enabling objectives were developed to explicitly identify the required learning elements within the cognitive, psychomotor and affective domains of learning. Specific instructional methods were then identified to support the learning and course content developed with these instructional methods integrated in to provide the overall module framework. Classroom assessment was designed as part of the instructional methods and in classroom experiences.

METHODS TO ASSESS CURRICULUM EFFECTIVENESS

Both quantitative and qualitative techniques were employed to assess the effectiveness of the curriculum. A one group, pre-post, quasi-experimental design was used to evaluate the application skills of students when provided patient case situations to evaluate (Campbell and Stanley, 1963). The students' ability to recognise verbal and non-verbal behaviours that are consistent with communication techniques that demonstrate caring approaches during patient-health professional interactions was assessed by

TABLE I Learning objectives

Course introduction

1. Understand the importance of the concepts and definitions of health, disease, illness, and disability in context of the therapeutic relationship with the patient.
2. Understand pharmaceutical care, the primary practice model of pharmacists, and the supporting knowledge, abilities, attitudes, skills and professional culture that supports this model.
3. Describe the practice environment needs to support contemporary pharmacy practice. Including: the work environment, accessibility to the pharmacist, the patient care area itself, the core reference library, and supporting computer services.
4. Understand the patient–pharmacist relationship in the context of a therapeutic relationship.
5. Understand the pharmacist roles in both independent and interdisciplinary work in the provision of patient care.

Module 1—Drug information skills of pharmacists

6. Understand how to obtain information from various knowledge sources to formulate a patient information database: patient chart, physical assessment data, laboratory test results, patient/care-giver interview information, other health professionals.
7. Demonstrate a basic understanding of the steps of the systematic approach to providing both patient specific and general drug information.
8. Demonstrate a basic understanding of the steps required to design, recommend, monitor and evaluate patient-specific pharmacotherapy.
9. Understand the difference between answering drug information questions and making recommendations for care.

Module 2—Therapeutic care planning skills of pharmacists

10. Demonstrate the ability to include all essential patient care components of a care plan between a pharmacist and patient, including monitoring and outcomes documentation and remuneration for services, if applicable.
11. Understand how a patient-specific drug information need “fits into” the overall care plan of a patient.
12. Demonstrate the ability to efficiently and optimally use information resources to answer drug information questions or make care recommendations.
13. Understand basic interviewing skill strategies that are used for focused interviews of patient and health professionals needed to obtain necessary patient database information.
14. Develop productive searching strategies of information resources to meet patient-specific drug information or care recommendation needs.
15. Determine the appropriate mode of communication of a patient-specific drug information response or recommendation for care. Appropriate modes include: verbal, progress note of chart, memorandum, consultation note, formal letter.
16. Prepare oral and written recommendations for a patient-specific drug information response or recommendation for care.
17. Communicate patient-specific drug information needs or recommendations for care both verbally and in writing.

Module 3—Caring behaviours of pharmacists

18. Demonstrate caring behaviours when simulating communications with patients.
19. Understand the principles of care documentation and demonstrate basic care documentation skills.
20. Identify a set of caring behaviours that are representative of delivering pharmaceutical care by pharmacists.
21. Describe care as a measurable set of behaviours that can be taught.
22. Identify specific, measurable practice outcomes of pharmacists when caring behaviours are used with patients.

having students view digitised video segments from a popular film entitled, “The Doctor”, and complete assessment checklists. The checklist criteria for assessing communication techniques that demonstrate caring approaches are shown in Table III. Open-ended discussions were held during the last class session of the module on caring behaviours to learn the students’ attitudes toward caring behaviours. Theme analyses of student comments were conducted.

Professional Caring Behaviour Survey

A Professional Caring Behaviour Survey was developed to assess the students’ ability to critically select the most desired professional caring behaviours. The survey consists of 30 items written in case format. Each case presents a situation and four options describing how a pharmacist might handle the situation. The cases were structured with the following implicit rules: (1) simple, moderate and complex case situations were used, (2) all three learning domains were used to frame the context (cognitive, affective and psychomotor), (3) the

options were constructed to represent an increasing degree of responsibility, (4) the responses ranged from the most passive, acceptable response to the most pro-active, caring response to improve the generalizability of the survey responses, and (5) a variety of practice settings commonly encountered by pharmacists were used as the case settings. The 30 items were designed so that the distribution of difficulty level was 25% simple, 50% moderate, and 25% difficult (see Table IV for sample items).

The instrument was administered at the beginning of the semester to all first year students as a baseline evaluation of performance. The instrument was also administered to second, third and fourth year pharmacy students to establish reliability. None of these students had been taught any aspect of the newly developing caring curriculum for this course. Any change observed in these students’ scores would be likely the result of new learning gained through the curriculum of the overall program, or maturation of the learners. The mean scores achieved for each academic year of students (Professional Year 1 = 24.68, Year 2 = 24.96, Year 3 = 24.26, Year 4 = 24.31) were not significantly different

TABLE II Curriculum map

Primary objectives	Instructional design approach	Classroom and learner assessment
1. Describe care as a measurable set of behaviours that can be taught.	<i>Preparatory reading:</i> Required primary literature about Watson's 10 Carative Factors (Watson, 1979), and pharmacist-specific caring behaviours (Galt, 2000).	<i>In class assignment:</i> Student generates an example of a pharmacist specific caring behaviour for each of the 10 Carative Factors of Watson.
2. Identify a set of caring behaviours that are representative of delivering pharmaceutical care by pharmacists.	<i>Classroom:</i> Mini—lecture (10–12 min): care as a concept and care as behaviour, review of Watson's 10 Carative Factors, care provision as a substantial component of pharmaceutical care, examples of pharmacist cases that demonstrate caring behaviours.	Small group discussion of case—requires developing a care plan. Students must identify the pharmacists' role, Responsibilities to the patient, and specific caring behaviours expected to occur within the patient's care plan. Creation of flow diagram in class for steps of pharmacist care plan, including the caring behaviours the pharmacist should integrate into the plan. Write out care plan using documentation principles from previous module.
3. Understand the principles of care documentation and demonstrate basic care documentation skills.	<i>Classroom:</i> Mini—lecture (10–12 min): Verbal and non verbal caring behaviours demonstrated by health professionals when communicating directly with patients. Demonstration of verbal and nonverbal caring behaviours during communication by displaying four digitised video clips demonstrating health professional–patient interactions. Each clip gradually moves from a minimal display of such behaviours to a fully developed display of such behaviours.	<i>In class assignment:</i> Students complete a checklist on which they indicate whether verbal and nonverbal caring behaviours are demonstrated in video clips between a health professional and patient.
4. Identify a set of caring behaviours that are representative of delivering pharmaceutical care by pharmacists. (continued)	<i>Preparatory Reading:</i> Overview of concept of outcomes, with a patient specific emphasis (Kane, 1997).	<i>In Class Assignment:</i> Students work in pairs: Two cases are provided, giving each student an opportunity to be a pharmacist, and a patient. One student acts as the pharmacist, interviews the patient and develops a care plan. Second student acts as the patient, and practices responding appropriately in the situation. The "patient" identifies all of the caring behaviours in communication and in the care plan itself that his/her colleague displayed or wrote.
5. Demonstrate caring behaviours when simulating communications with patients.	<i>Classroom:</i> Mini—lecture and case-based discussion (10–12 min): Patient cases are introduced to the students. The cases have a care plan provided. Students are asked to evaluate the cases and identify the caring behaviours, and the associated outcomes observed. Open ended discussion (7–10 min): Student attitudes and viewpoints about caring behaviours conducted.	
6. Identify specific, measurable practice outcomes of pharmacists when caring behaviours are used with patients		

TABLE III Checklist of caring behaviours for classroom assessment

Description of criteria use:
<p>Verbal caring behaviours</p> <ul style="list-style-type: none"> • Verbally responds to an expressed concern • Explains procedure prior to initiation • Verbally validates patient's physical status • Verbally validates patient's emotional status • Shares personal observations or feelings (self-disclosing) in response to patient's expression of concern. • Verbally reassures patient during care. • Discusses topics of patient's concern other than current health problems. <p>Nonverbal caring behaviours</p> <ul style="list-style-type: none"> • Sits down at bedside. • Touches patient exclusive of procedure. • Sustains eye contact during patient interaction. • Enters patient room without solicitation. • Provides physical comfort measures.

(one-way ANOVA: $p = 0.551$) (Cohen, 1988). Internal consistency for all four years was 0.71 (Kuder-Richardson Formula 20) (Ebel, 1972).

EVALUATION OF THE EFFECTIVENESS OF THE CURRICULUM

Evaluation of Student Performance

Students completed the Professional Caring Behaviour Survey at the beginning of the semester prior to any course instruction and during the last week of class after completing the course. A significant improvement in mean score from 24.65 to 27.54 was observed (paired t -test: $t = 7.768$; $p < 0.001$). The students demonstrated an increase in their

TABLE IV Sample items from professional caring behaviour survey

Instructions: You are the pharmacist in each of the case situations you are about to read. Take your time and think about what you believe your action would be as a pharmacist. Select the answer that most accurately describes how you think you would behave.

1. You are the pharmacist at a chain retail pharmacy. You take the filled prescription to the patient at the pharmacy check out area. When the patients sees the prescription price, she says, "I'll never be able to afford continuing this medication. It is just too expensive..." You...
 - a. Let her know you understand.
 - b. Discuss less expensive alternatives and offer to contact her physician about a possible switch. (*desired response*)
 - c. Encourage her to take it anyway because it is important therapy.
 - d. Give it to her for free, incurring the cost of the medication on the chain pharmacy business.
2. You are working in the hospital pharmacy reviewing Mrs Jones medication orders. You find that the new medication ordered will affect the serum concentration of her antiarrhythmic, leading to possible toxicity. You decide to:
 - a. Contact Mrs Jones and inform her by counselling her about this interaction so she can discuss it with her physician.
 - b. Refuse to fill the medication order and do not send it to the nursing floor.
 - c. Contact the patient's nurse so the nurse can discuss a possible therapy change when the physician shows up on rounds.
 - d. Determine alternative therapies, which may work in this patients situation, and contact the prescriber to discuss this. You let the patient know you have done this and also invite them to ask any questions they may wish answered of you directly. (*desired response*)
3. You go to conduct a medication history on Jack Short, a newly admitted 78-year-old nursing home patient. He lost his wife of 42 years about three weeks ago. As you ask questions, he acts minimally responsive. He is clearly depressed and despondent because of the loss of his wife. However, the information you need is important to optimising his drug therapy. You...
 - a. Indicate you understand his difficulty and excuse yourself without completing the interview at that time, planning to return at a later date and time.
 - b. Let Mr Short know you understand his pain. You have a brief discussion to find out what is of most importance to Mr Short. You then relate the importance of the medication history to what he believes is important, and further describe how he will then benefit from participation. (*desired response*)
 - c. Work quickly to ask your questions and record whatever information Mr Short gives you.
 - d. Ask someone else to interview him because it is so difficult for you to deal with him.
4. Cynthia has terminal cancer. She brings you a prescription for a new medication to be added to her regimen in order to decrease the nausea and vomiting from her chemotherapy. As she hands it to you she states, "I do not really know why I am bothering to get this filled. My condition is not reversible." You...
 - a. Fill the prescription correctly, and discuss with her the benefits this medication is intended to provide. You let her know you are available for her now and in the future if she has any needs or concerns you can help her with. (*desired response*)
 - b. Accept the prescription, fill it, taking care to make no mistakes.
 - c. You agree with her and further validate her belief that there is not point in her taking this medication.
 - d. Fill the prescription correctly, and discuss with her the benefits this medication is intended to provide.
5. John Paslovec is a 64-year-old man who attends the Veterans Affairs Primary Care Clinic for his medical needs. You are the pharmacist in the clinic who monitors his anticoagulation therapy (warfarin). HP has had two deep vein thrombosis episodes, one resulting in a minor stroke with no permanent injury. The warfarin therapy is important for JP to continue taking to prevent future strokes. When you look at the INR (the blood test that indicates whether the dose of warfarin is correct), you see that the value is very low. In prior visits, the INR was in the correct lab value range. When you discuss this with JP, he tells you, "I don't think this medication works. I've decided not to take it anymore." You...
 - a. Educate JP about the value of this medication to him in his specific situation and encourage him to get his prescription refilled.
 - b. Interview JP to understand why he doesn't think the medication works. You then educate him about the value of this medication to successful management of his condition. You let him know you will follow up by telephone to determine how he is doing with taking his medication in a week or so. (*desired response*)
 - c. JP is now "subtherapeutic". You contact JP's doctor and insist he follow-up with another doctor's appointment.
 - d. Discuss with JP why he believes the medication doesn't work, you let him know you understand and reinforce that it is his choice whether he wants to continue therapy or not.

ability to critically evaluate a case and choose the most caring behaviour representing the most desirable action on the part of the pharmacist.

After completion of the survey instrument, a half-hour session was devoted to an open-ended discussion about the behavioural options presented in each of the cases. The comments and reflections of the students were recorded and evaluated by three pharmacist-instructors for future curriculum development and improvement (Morse and Field, 1995; LeCompte and Schensul, 1999a,b). These pharmacists organised their observations into three themes: *Traditional Role Conflict, Patient Advocacy and Conflicts with Physicians and Barriers to Performing these Behaviours as a Standard of Practice*. Student specific comments representing these themes are summarised.

Theme 1: Traditional Role Conflict: Several students commented that many of their traditional role models whom they have watched in employment situations “behave in an apathetic manner and just don’t appear to care”. “Many of the new graduates want to have substantial patient–physician interaction—but the older pharmacists pressure the younger pharmacists to not do the patient interaction work”. Student comments reflect their perception that practicing pharmacists who have more years of experience are generally passive. Possibly there has been a migration to a minimalist approach to patient work.

Theme 2: Patient Advocacy and Conflicts with Physicians: This was a substantial area of concern for the pharmacy students. Several poignant comments reflect the degree of conflict felt by the students at this early stage of professional learning. One student stated, “I do not know if it is best to preserve the team [health profession team] or advocate for the patient?” Another stated, “I find myself in conflict when trying to answer these cases because I don’t want to cross the lines of other health professionals—the patient should see us as a team.” Additional comments included, “I don’t like placing the patient in the middle between the doctor and myself—it’s a conflict. I want to advocate for the patient. Patients are dependent on both of us [physician and pharmacist] and the doctor should protect them. I have seen a pharmacist tell a doctor who asked her not to counsel his patients that she [the pharmacist] has a responsibility to the patient and will continue to serve the patients’ needs. I was very uncomfortable watching this.”

Theme 3: Barriers to Performing These Behaviours as a Standard of Practice: These student comments reflect several different barriers identified as important to the context of several of the cases. “Is there really a realistic time frame in our work? I would like to do many of these things but reality says we do not have time for them. I found that in many of these

cases I would do some of these things but would not have time to do most of them.” “The environment we work in just isn’t right at this time for this work.” Students had concerns about legal barriers as well. “I found that some of these questions caused a moral dilemma for me. I can’t do some of these things under the law but I think they are right to do and I want to do them. I am not sure how to solve this problem. How do I? How can I change the law?” Students were also not sure about how to solve financial barriers. “I am not sure how I would get people their medications when they cannot afford them.” And there was concern expressed about how to incorporate care-takers and other family members appropriately into care. “I am not sure how to handle situations in which family members interfere with care as I am providing it.”

Instructor Reflections

These student comments are valuable for considering how the professional curriculum should be revised. Students identified important areas related to professional responsibilities at the outset of the course. Their comments have helped the primary instructor think about how to expand the use of digitised videos. The caring behaviours section will be expanded to address specific behaviours and enhance classroom discussions.

Limitations

There are limitations to this curriculum evaluation. The one group, pre- post-test quasi-experimental design is weakened by some threats to internal and external validity. The internal validity threat of greatest concern is that of testing. It is possible that testing effects, i.e. some improvement in scores with a second administration of the test, accounted for some change. However, testing effects are thought to be susceptible to bias when the method of testing is novel or motivating, and when the desired results of the test are made public before the test is readministered. Neither of these circumstances is true in this project. Students did not see what the desired or expected responses were after completing the baseline pre-test. Further, the caring behaviour module did not begin until 10 weeks after the baseline pre-test was administered. No events occurred during the semester suggesting that student performance was likely affected. In addition, it is not likely that a maturation process has occurred during the time interval from pre- to post-test.

It is not yet known if our educational intervention predicts the future behaviour of pharmacy students. It is not clear that caring behaviours will be chosen when students are placed in practice situations for which they exercise choice. Our Professional Caring

Behaviour Survey data for all four years of the program suggest that our present curriculum does not influence future caring behaviours. Therefore, teaching the specific expected behaviours seems to be an essential step to promote change. This course will be modified further to provide exercises to identify the caring behaviours of pharmacists and linking them to possible patient outcomes.

DISCUSSION

The profession of pharmacy historically has emphasised the core skill set required to achieve optimal therapeutic decisions and management. The core skill set culminated in a curriculum with a predominant emphasis on cognitive skills, i.e. good old-fashioned book learning! The last 10 years has been filled with dynamic curriculum revisions and overtures for practice change. Our schools have revised our professional curriculum to prepare practitioners to provide pharmaceutical care. The advancement has required substantial modification including such changes as: (1) integration of basic science and practice-based curriculum in the didactic years, (2) providing early experiences with professional sites, and (3) shifting the assessment of both didactic and practice-based curriculum to outcomes based. Pharmacy schools have made substantial investments to produce graduates who adopt practice centred on the principles of pharmaceutical care. These changes have been necessary. However, the evidence of behavioural change among practitioners is slight, and students have some concerns. There are solutions to the direct concerns of the students, and teaching of optimal behaviours for practice situations appears to have some promise.

Behavioural change within a professional culture is difficult. Four change drivers must be in place in order to accomplish the cultural shift toward adoption of caring behaviours as a recognised practice approach. The first driver is a clear description of our profession's caring behaviours related to patient needs. Preliminary work has provided a start for the profession. The second driver is recognition of these specific behaviours as behaviours expected of pharmacists. Examination of health policy issues associated with legal responsibilities and obligations, professional association standards of responsibility, peer review organizations, and accreditation standards will provide insight as to the degree to which these behaviours are readily identified for pharmacy practice. The third driver is incorporation of professional behaviours within the core educational training standards for pharmacy, i.e. as accreditation standards. The fourth driver is the "state" of the professional literature within pharmacy. The historical develop-

ment and breadth of published literature within the profession provides insight as to the existence of expectations in practice and the self-examination pursued to revalidate the profession's responsibilities and functions to society. This work helps to contribute to the fourth driver, to provide evidence as to the need and effectiveness in teaching pharmacy students these behaviours.

IMPLICATIONS

Education focused on how to properly conduct oneself when making professional behaviour choices will likely increase the student's actual adoption of these desired behaviours. The results of this work suggest that teaching these behaviours explicitly is necessary in order to expect students to recognise and consider these behaviours as preferred when progressing through their professional education program. We must further define "care" for pharmacists as a set of specific behaviours in order to see improvement in advocacy for patients. These behaviours must be identified in documents of public policy, professional standards and educational training program standards of pharmacists. The implications of pharmacists adopting caring behaviours are substantive. Measurable improvement in health outcomes of patients is anticipated because of decreased fragmentation of care at the individual patient level and improved access through advocacy for the individual (Campbell and Stanley, 1963; Krathwohl *et al.*, 1964; Commission to Implement Change in Pharmaceutical Education, 1993b). The future training of health professionals must explicitly incorporate these behaviours into practice and standards of professional conduct should expect these behaviours of professionals.

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