

# Structural Consultation Skills of Hong Kong Pharmacists in Primary Care Setting

LEUNG, Shek Ming<sup>a\*</sup>; NG, Yuen Tung, Meyone<sup>b</sup>

<sup>a</sup> Department of Pharmacology and Pharmacy, The University of Hong Kong, Hong Kong SAR, China

<sup>b</sup> School of Pharmacy, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China  
(\* Corresponding author)

## ABSTRACT

Pharmacists play a crucial role in primary care settings by providing critical healthcare services, including medication management, patient education, and self-care empowerment. However, there is a lack of standardized consultation models intended for pharmacists in Hong Kong's primary care settings. This article evaluates eight major consultation models for their suitability in primary care pharmacy settings using the PharmaCAT assessment tool. Models like the Calgary-Cambridge guide and Pendleton method, which provide comprehensive and patient-centered consultation, are potentially suitable. Additionally, question-asking skills acronyms from Canadian models, such as WWHAM and QuEST-SCHOLAR, are discussed. The article suggests developing a hybrid consultation model combining elements from various models to enhance primary care pharmacist consultations in Hong Kong.

**Keywords:** Consultation models, PharmaCAT, Pharmacy practice, Primary health care, Question-asking skills

## INTRODUCTION

**Pharmacists** play a crucial role in primary care settings by providing critical healthcare services, including medication management, patient education, and self-care empowerment. The effectiveness and safety of healthcare interventions are directly influenced by the quality of pharmacist-patient interactions. There is a lack of standardized consultation models intended for pharmacists in Hong Kong's primary care settings. As a result, consultations are frequently unstructured, potentially resulting in the omission of questions aiding differential diagnosis and treatment decisions. The definition of consultations varies between professionals. In pharmacy consultations, the two major directions are gathering information from patients and giving recommendations according to patients' conditions. Currently, there is no study evaluating the consultation performance of community pharmacists in Hong Kong. In a study from Australia about the response to complaints of insomnia, most pharmacists were scored poorly in asking questions prior to supply. Pharmacists had very low scores in asking sleep-specific questions.<sup>(1)</sup> Some suggest that a guided algorithm or clinical practice

guideline for pharmacists are needed to improve consultation.<sup>(2,3)</sup>

In contrast to Hong Kong, many foreign countries have successfully implemented consultation models for pharmacists in primary care settings. These models have demonstrated improved consistency in consultations and enhanced patient outcomes. The adoption of a clearly defined consultation model could direct the consultation flow, ensuring that no significant information is overlooked during the process of differential diagnosis and treatment decision-making.

The purpose of this literature review is to investigate the need for primary care settings to employ a consultation model that has been tailored for Hong Kong pharmacists. Their potential influences on consultation quality and patient care outcomes will be discussed by evaluating their advantages, limitations, and feasibility in Hong Kong.

## METHODOLOGY

Since there is no commonly used consultation model in Hong Kong, this study investigated and discussed overseas models from the United Kingdom (UK) and Canada. The aim is to identify a suitable consultation model or blend components from various models to enhance the quality of pharmacy consultations in Hong Kong's primary care settings.

The PharmaCAT assessment tool, which was developed by modifying the 'Royal College of General Practitioners' Video Assessment Tool,<sup>(4,5)</sup> was used to evaluate the consultation models. A set of 12 evaluation criteria were chosen and modified to fit the context of pharmacist consultations in Hong Kong.

Eight consultation models recommended by the Centre for Pharmacy Postgraduate Education (CPPE) of UK were evaluated.<sup>(6)</sup> These models include the biomedical model, Balint theory, transactional analysis model, anthropological model, Calgary-Cambridge guide, the Pendleton method, Roger Neighbour's inner consultation model, and also the BARD model. Each model was subjected to the PharmaCAT assessment tool to determine its features, advantages, and disadvantages.

In addition to comparing the models, this study provided a brief introduction and discussed the practical toolkits of the UK and Canadian models.<sup>(7)</sup> The findings were contextualized with regard to the challenges faced by pharmacists at Hong Kong. Recommendations were made for potential adjustments or adaptations to fit the regional healthcare system and cultural considerations.

## RESULTS

All 8 models were assessed by the 12 criteria in PharmaCAT as shown in **Table 1**. Among these, a high degree of similarity in consultation flow while performing differential diagnoses and making treatment decisions was discovered. All consultation models, except the Balint Theory, provide pharmacists with a structured approach to gather information from patients for differential diagnosis while encouraging patient participation. BARD, Roger Neighbour's Inner Consultation and Pendleton method fulfils all 12 requirements, while the Calgary-Cambridge guide fulfils 9, and the anthropological model and transactional analysis model fulfils 7 requirements. The Balint Theory and bio-medical model fulfils 4 and 3 requirements respectively.

**The bio-medical model** consists of history taking, physical examination and laboratory testing before diagnosis and treatment.<sup>(8)</sup> It considers history taking on its own as sufficient to determine the cause. It focuses on the physical characteristics of the patient but not the psychological and social factors. This model is effective in acute settings that need quick decision making. However, it has significant limitations as it ignores the psychological and social aspects of patient care.

**The Balint theory** is not a structured model or framework but rather a collection of ideas about the consultation process. It emphasizes the importance of the healthcare professional-patient relationship and the psychological aspects of patient care. Key concepts include:<sup>(9)</sup>

- the importance of attentive listening,
- recognizing the "hidden agenda" behind a patient's initial complaint,
- being aware of physical complaints that may result from emotional distress,
- viewing the consultation itself as a therapeutic tool, and
- suggesting the use of long consultation.

While this approach helps healthcare professionals connect and empathize with patients, it requires more

**Table 1. Comparison of the eight models suggested by CPPE using PharmaCAT.**

Severity on Patient's Safety	Bio-medical Model	Balint Theory	Transactional Analysis Model	Anthropological Model	Calgary-Cambridge Guide	Pendleton (Method)	Roger Neighbour's Inner Consultation	BARD
1. Encouraging patient contribution	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Using psychological and social information	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Exploring patient's health understanding	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4. Establishing clinical reason and assessment	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
5. Obtaining information for new diagnoses	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
6. Explaining clinical condition in appropriate language	No	No	Yes	Yes	Yes	Yes	Yes	Yes
7. Incorporating patient's health beliefs	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8. Developing appropriate management plan	No	No	No	No	Yes	Yes	Yes	Yes
9. Involving patient in management decisions	No	No	No	No	Yes	Yes	Yes	Yes
10. Confirming patient's understanding of diagnosis	No	No	No	No	No	Yes	Yes	Yes
11. Enhancing compliance and adherence	No	No	No	No	No	Yes	Yes	Yes
12. Specifying follow-up or review conditions	No	No	No	No	No	Yes	Yes	Yes

time and specialized skills to implement effectively and may be less practical in fast-paced environments.

**The transactional analysis model** categorizes interactions into three roles: parent, adult, and child. The “parent” role is authoritative and nurturing, often giving instructions or advice. The “child” role is more emotional and reactive, expressing feelings and needs. The “adult” role is rational and objective, focusing on facts and problem-solving.<sup>(10)</sup> This model reminds pharmacists that effective communication happens when both the healthcare professional and the patient interact from the “adult” role, ensuring a respectful and cooperative exchange. This model helps improve understanding and reduce conflicts but requires awareness and adaptability to apply consistently.

**The anthropological model** in pharmacy consultation is about understanding the patient’s cultural and social background to better understand their health beliefs and behaviors.<sup>(11)</sup> It encourages pharmacists to be aware of their own biases and to respect the patient’s views and experiences. This helps in providing care that is more personalized and sensitive to the patient’s cultural context.

A consultation is considered satisfactory if the pharmacist can answer the following questions:

- What has happened?
- Why has it happened?
- Why has it happened to me?
- Why has it happened now?
- What would happen if nothing was done?
- What should I do about it?
- Who should I consult for further help?

**The Calgary-Cambridge guide** emphasizes effective communication and comprehensive patient care through five stages:<sup>(12)</sup>

1. **Initiating the session:** Prepare, introduce, establish rapport, identify reasons for consultation.
2. **Gathering information:** Explore problems, elicit the patient’s perspective.
3. **Physical examination:** Conduct if necessary.
4. **Explanation and planning:** Provide information, check understanding, develop an action plan.
5. **Closing the session:** Summarize, agree on a plan, safety-netting (e.g. when to have follow up or seek emergency help).

Verbal and non-verbal skills are essential at each stage. The guide is based on extensive research from fields such as psychology and medicine. These stages help pharmacists conduct thorough consultations covering all aspects of patient care, though mastering them may require additional training and practice.

When eliciting the patient’s perspective, the **ICE (Ideas, Concerns, Expectations)** acronym can be applied:

- **Ideas:** “What do you think is causing your symptoms?”
- **Concerns:** “Is there anything in particular that worries you about your symptoms?”
- **Expectations:** “What do you hope to achieve from this consultation?”

The ICE approach can also be used to explore perception on medication treatment before providing information on the medication, assisting pharmacist to screen for misconception and address concerns.

**The Pendleton method** outlines seven tasks for pharmacists to complete during consultations.<sup>(13)</sup> Widely used in pharmacy training, it helps pharmacists use time and resources effectively while involving patients to achieve a shared understanding. This method fosters strong patient connections.

#### **Pendleton’s Framework:**

- Discover the reason for attendance
- Consider other problems
- Choose an appropriate action
- Achieve a shared understanding
- Involve the patient in management
- Use time and resources appropriately
- Establish or maintain a relationship

**Roger Neighbour’s Inner Consultation model** outlines five key steps that pharmacists should follow during a consultation to ensure effective communication and patient care. These steps are:<sup>(14)</sup>

1. **Connecting:** Establishing a rapport with the patient to create a comfortable and trusting environment.
2. **Summarizing:** Recapping the patient’s concerns and the information discussed to ensure mutual understanding.
3. **Handing Over:** Sharing the management plan with the patient, ensuring they understand and agree with the proposed actions.
4. **Safety Netting:** Providing advice on what to do if things do not go as planned, including when and how to seek further help.
5. **Housekeeping:** Reflecting on the consultation to manage personal emotions, thoughts, and behaviours, ensuring self-care and continuous improvement.

**The BARD model** is a structured approach to communication that stands for Background, Assessment, Recommendation, and Decision. It helps clarify problems and provide evidence-based solutions, facilitating decision-making. This model enhances clear and concise communication between pharmacists, patients, and other healthcare professionals.<sup>(15)</sup>

#### **BARD:**

- **Background:** Provide context and relevant information.
- **Assessment:** Analyse the situation or problem.
- **Recommendation:** Offer evidence-based solutions.
- **Decision:** Agree on the next steps and actions.

## QUESTIONING SKILLS IN CANADIAN AND UK CONSULTATION MODELS

Effective questioning is a cornerstone of pharmacy consultations, enabling pharmacists to gather comprehensive information and provide appropriate care. Yet, the above models do not discuss the details on the skills. Several Canadian models offer structured approaches to questioning, each with unique strengths.<sup>(7)</sup>

### WWHAM:<sup>(7)</sup>

The WWHAM model is a straightforward mnemonic that helps pharmacists quickly gather essential information:

- **Who is it for?**
- **What are the symptoms?**
- **How long have the symptoms been present?**
- **Action already taken?**
- **Medication being taken?**

This model ensures that pharmacists obtain a clear understanding of the patient's condition and any prior actions taken, which is crucial for making informed recommendations.

### QuEST:<sup>(7)</sup>

The QuEST model provides a more detailed framework for assessing and managing patient care:

- **Quickly and accurately assess the patient:** This involves asking about the current complaint using the **SCHOLAR** method (mentioned below), as well as inquiring about **HAM**
  - o Medical **H**istory,
  - o **A**llergies, and
  - o other **M**edications or products (e.g. herbal and supplements) being used.
- **Establish that the patient is an appropriate self-care candidate:** Ensure there are no severe symptoms, persistent or recurrent symptoms without an identifiable cause.
- **Suggest appropriate self-care strategies:** Recommend suitable medications and/ or general care measures, like lifestyle modification.
- **Talk with the patient:** Discuss medication action, administration, adverse effects, expected outcomes, and appropriate follow-up.

### SCHOLAR:<sup>(7)</sup>

The SCHOLAR method is integrated within the QuEST model to delve deeper into the patient's symptoms:

- **Symptoms:** What are the main symptoms?
- **Characteristics:** What are the symptoms like?
- **History:** What has been done so far? Has this happened in the past?
- **Onset:** When did it start?
- **Location:** Where is the problem?
- **Aggravating factors:** What makes it worse?
- **Remitting factors:** What makes it better?

### Additional Considerations:

Incorporating elements from the CPPE guidelines from

UK,<sup>(6)</sup> it is important to ask about recent changes in the patient's lifestyle, such as sleep, diet, tobacco, alcohol, exercise and medications. These factors can be critical in identifying underlying causes and risk factors for the patient's complaint.

## DISCUSSION

The evaluation of the eight consultation models highlights their unique strengths and the potential for a complementary approach in Hong Kong's primary care settings. Given the challenges of rising demand for health services, staffing and resource constraints, and stringent pharmaceutical product regulations, it is crucial to adopt models that enhance the quality and safety of pharmacy practice.

In fast-paced environments, models like WWHAM and QuEST-SCHOLAR are particularly effective. These models provide structured frameworks for quickly gathering essential information, ensuring that no critical details are missed. This is vital in Hong Kong's busy healthcare settings, where pharmacists must make swift, informed decisions, especially during over-the-counter (OTC) recommendation at community pharmacy.

- **WWHAM** focuses on key questions to quickly assess the patient's condition.
- **QuEST-SCHOLAR** offers a detailed approach to patient assessment and management, integrating comprehensive questioning techniques.

For more thorough consultations, like during medication management services (MMS) at pharmacy or district health centre, models such as the **Anthropological Model**, **Calgary-Cambridge Guide**, and **Pendleton Method** are more suitable. These models emphasize understanding the patient's cultural and social background, effective communication, and patient involvement in the consultation process.

- The **Anthropological Model** helps pharmacists provide culturally sensitive care by considering the patient's background and health beliefs.
- The **Calgary-Cambridge Guide** ensures comprehensive patient care through its structured stages, promoting effective communication and thorough information gathering.
- The **Pendleton Method** involves patients in the decision-making process, fostering a shared understanding and strong patient-pharmacist relationships.

## CONCLUSION

The eight consultation models evaluated offer valuable insights and can be adapted to Hong Kong's unique healthcare system. The busy environment necessitates efficient and effective models.

Question-asking acronyms like WWHAM and QuEST-SCHOLAR are crucial for comprehensive information gathering and informed recommendations.

Adopting a hybrid model combining elements from various models can enhance pharmacy consultations, addressing unique challenges and improving patient care outcomes.

## ACKNOWLEDGEMENT

The authors would like to thank the following pharmacy interns, and they are Mr. Adrian Fung, Ms. Crystal Lam and Mr. Chui Lai Him. And they are all from the University of Hong Kong. Another person who plays a pivotal role in the writing is Ms Tiffany Chow, and she is currently the resident pharmacist of Pamela Youde Nethersole Eastern Hospital.

### Author's background

**Mr. LEUNG, Shek Ming** is a Lecturer of Department of Pharmacology and Pharmacy, The University of Hong Kong. His email is lsm836@hku.hk

**Ms. NG, Yuen Tung, Meyone** is a Pharmacist of School of Pharmacy, Faculty of Medicine The Chinese University of Hong Kong. Her email is meyoneng@cuhk.edu.hk

## References

1. Kippist C, Wong K, Bartlett D, Saini B. How do pharmacists respond to complaints of acute insomnia? A simulated patient study. *International journal of clinical pharmacy*. 2011;33:237-245.
2. Al Aqeel S, Abanmy N, AlShaya H, Almeshari A. Interventions for improving pharmacist-led patient counselling in the community setting: a systematic review. *Syst Rev*. May 2 2018;7(1):71. doi:10.1186/s13643-018-0727-4
3. Sergeevna SM, Efimovna LE, Vladimirovna AI. Improvement of pharmaceutical consultation process in drugstores. *J Adv Pharm Educ Res*. 2020;10(1):137.
4. Stewart D, George J, Bond C, et al. Developing and validating a tool for assessment of pharmacist prescribers' consultations. *Family practice*. 2010;27(5):520-526.
5. Scala D, Mucherino S, Wirth F, et al. Developing and piloting a communication assessment tool assessing patient perspectives on communication with pharmacists (CAT-Pharm). *International Journal of Clinical Pharmacy*. 2022;44(4):1037-1045.
6. Grimes L, Barnett N. Consultation skills for pharmacy practice: taking a patient-centred approach. *Centre for Pharmacy Postgraduate Education*. 2014;
7. Taylor J, Rocchi M. The Art and Science of Counselling Patients on Minor Ailments/OTC Medicines. *Selfcare*. 2018;
8. Farre A, Rapley T. The new old (and old new) medical model: four decades navigating the biomedical and psychosocial understandings of health and illness. *MDPI*; 2017:88.
9. Pinder R, McKee A, Sackin P, Salinsky J, Samuel O, Suckling H. Talking about my patient: the Balint approach in GP education. *Occasional paper (Royal College of General Practitioners)*. 2006;(87):vii.
10. Berne E. Principles of transactional analysis. *Indian journal of psychiatry*. 1996;38(3):154.
11. Denness C. What are consultation models for? *InnovAiT*. 2013;6(9):592-599.
12. Silverman J, Kurtz S, Draper J. *Skills for communicating with patients*. CRC press; 2016.
13. Norcross WA. The Consultation: An Approach to Learning and Teaching. *JAMA*. 1985;253(3):421-422.
14. Neighbour R. *The inner consultation: how to develop an effective and intuitive consulting style*. CRC press; 2018.
15. E. W. *An introduction to BARD: a new consultation model* 2002.