Transition into an Emergency Nurse Practitioner: a sharing of self-reflection

轉變為急症護師：自我反映的分享

JYM Chung 鍾婉雯

The role of the Emergency Nurse Practitioner (ENP) has been established in other countries for a few decades, such as the United Kingdom (UK) and the United States where it has developed rapidly in these countries. The concept of the nurse practitioner is to empower those nurses who have a sound clinical base and specialty skills to enable them to make autonomous judgements and decisions regarding patient care. Evidence shows that the expanded role enables greater continuity and consistency in the delivery of "holistic care". Moreover, the ENP service also helps the accident & emergency department to be more effective in its use of available nursing and medical resources. In view of the situation in Hong Kong, because of the unsatisfactory primary health care system, health care providers in emergency care have to deal with huge numbers of patients with minor illnesses and injuries. Patients in this category have to wait for long periods to see a doctor. So the development of the role of ENP for the management of minor injury would be a good option to better utilise departmental manpower to meet patient needs. The author has finished training for minor injury in UK which prepared emergency nurses to take up the ENP role in accident & emergency departments. In this article, the author will share her ENP training experience in the whole process of learning. (*Hong Kong j.emerg.med.* 2008;15:177-184)

急症護師的角色在其他國家已確立了數十年，例如英國及美國等國家的迅速發展。護師的概念是授權有穩固臨床基礎及專科技能的護士，令他們能夠在關於病人護理方面作出自主的判斷和決定。證據顯示這擴大的角色令交付「整體護理」中能有更大的連貫性及一致性。而且，急症護師的服務也有助急症室更有效地使用其可利用的護理及醫療資源。由於香港的基層醫療護理系統情況未能令人滿意，緊急護理的醫護人員必須處理大量輕微疾病和受傷的病人。這類病人必須等候長時間才能見醫生。所以發展急症護師處理輕微創傷的角色會是更好地運用部門的人力，以滿足病人需要的一個好選擇。作者完成了在英國的輕微創傷訓練，裝備急症護士在急症室從事急症護師的角色。本文作者會分享她整個學習過程中的急症護師訓練經驗。

Keywords: Nurse practitioners

關鍵詞：護師

Introduction

The Nurse Practitioner (NP) role has been advocated in Accident and Emergency (A&E) departments in many countries, including the United Kingdom (UK),[1] the United States of America (USA)[2] and Australia.[3] Historically, the reasons for this have been a shortage of medical staff, a rise in A&E attendance, increase in patient expectations, and an aging population. All of these factors have led to changes in nursing and to the introduction of the Emergency Nurse Practitioner (ENP) role. NP are nurses who have a sound clinical foundation and specialist skills that enable them to make autonomous decisions and judgements regarding

Correspondence to:
Chung Yuen Man, Josephine, MN, BSN(Hon)
Prince of Wales Hospital, Accident and Emergency Department, 30-32 Ngan Shing Sheet, Shatin, New Territories, Hong Kong
Email: Jo.chungym@gmail.com

patient care, and they are totally accountable for their actions.[4,5] Because of the unsatisfactory primary health care system in Hong Kong, emergency care professions have to deal with huge numbers of patients with minor illnesses and injuries, and these patients have to wait for a long time to see a doctor. Therefore, the development of the ENP role seems to offer a good solution to meeting patient needs. Evidence shows that patients are satisfied with the ENP service because its expanded role enables greater continuity and consistency in the delivery of "holistic care".[6] Patients can be seen and treated by the same health care provider from registration to discharge. They can also be seen by the most appropriate person at the most appropriate time. As the management of minor injury is relatively straightforward, the early management of this group of patients not only serves to shorten their waiting time and length of stay, but can also reduce the number of patients waiting to see a doctor.[7]

The ENP service also helps A&E departments to use their available nursing and medical resources more effectively. Because these nurses are able to share doctors' workload, doctors can spend more time with the more seriously ill patients. Finally, this expanded role increases the autonomy of nursing practice. It gives nurses greater job satisfaction and boosts their morale.[8]

The development of Emergency Nursing as a specialisation over the past decade or more means that there are now increasing numbers of experienced nursing staff who are well trained in advanced nursing skills and knowledge. To make the most out of our invaluable nursing resource in the field of emergency care, the most innovative, effective, and practicable direction for the near future would be to draw on the experience of other countries and develop ENPs in Hong Kong.

As an emergency nurse from Hong Kong, I was invited to take part in a minor injury and illness management course in the UK. This was a degree-level course that prepares emergency nurses for the management of minor injury and illness. The course has prepared me to be an autonomous practitioner by enhancing my clinical skills and knowledge, professional judgement, and critical reflection in practice.

Understanding the role of the autonomous practitioner

In Hong Kong, the only rule in nursing practice is to follow doctor's orders.[9] In this type of work culture, our understanding of the meaning of an autonomous practitioner is superficial. Chang and Wong[9] commented that the lack of role models in Hong Kong is one of the factors that have influenced the development of advanced practice in nursing. It was a valuable experience for me as an overseas student to experience clinical practice in a UK hospital, in which the ENP role is well-established. Having role models was a very important part of my early stages of learning.[10] I was very impressed with my observations of how ENPs work independently in assessing, diagnosing, treating, and discharging patients. They not only managed patients' physical problems, but also their social and psychological needs.[11] A holistic approach to the NP role was seen as a strength in ENP consultations.[12] Moreover, I noted that doctors and nurses in UK had a good working relationship, and would discuss patients' problems together. It has been corroborated that doctors would be more accepting of the involvement of nurses in their area, if they are aware of their rich clinical experience and adequate training.[13,14]

History taking and documentation

My experience of autonomous practice began when I undertook patient consultations. To make the transition to this autonomous role, I had to re-learn the way to handle patient problems using a medical system, such as taking a patient history, determining the appropriate examinations and investigations, and identifying differential diagnoses and treatment plans.[15] Although I had already had a number of years of experience working in an A&E department, I suddenly felt like a novice.[16] Before attending the ENP course in UK, my history-taking skills were limited to initial triage assessment. After completing a module in "History Taking and Documentation", I now know what should be included in patient records and understand the systematic skills that can facilitate the history-taking process. I now realise that good documentation is essential to facilitate the continuity of care.[17] When writing up clinical records, I must

assume that the information provided would stand up for challenge in court. Thus, it must conform to certain standards. For example, the cause of injury should be stated exactly according to the information provided by the patient or, if possible, directly by using the patient's own words.[18] This is because detailed records help to demonstrate consistency between the mechanism of injury and the injuries sustained. The location and characteristics of injuries have to be recorded as precisely as possible using well-accepted medical terms, and the size of wounds must be described using measurements.[19] At the beginning of the course, I was not skilful in history taking or documentation. I was unable to provide such details like the mechanism of injury, any protective gear worn at the time of injury, or the patient's condition immediately after the injury. I quickly realised that an incomplete history would affect my ability to identify the severity of injury or other possible related injuries. For example, in the early assessment of a patient who had been injured in a bicycle accident, if I was unaware of the fact that he or she was not wearing a helmet at the time of injury, then I would not suspect the presence of head injury.

I realised that my most significant weakness was my inability to accurately describe the anatomical positions and names of bones. As I was frustrated by my inability to provide satisfactory documentation, I attempted to come up with other approaches to the problem. For example, I accepted my mentor's advice to use a systematic approach in taking patients' histories. I also made an effort to improve my history-taking and documentation skills, and soon some degree of improvement could be seen in my description of the mechanism of injury and anatomical positions and names of bones, though these were by no means perfect. I had further difficulty in describing the radiological results. I could only describe a bony injury as "fracture" or "no fracture," rather than using more specific descriptions, and I failed to document all the abnormalities in X-ray films. I came to understand that radiological results must be described in a consistent style using commonly accepted terminologies.[20] This is particularly important in subsequent communications with specialists.[21] Sharing the same "language" as other medical staff not only enhances the continuity of patient care through effective inter-professional communication, but also raises the profile of the NP in a "doctors' world."[1] The realisation of my knowledge deficit prompted me to learn more about the terminology of bone injuries. I then tried to give more detailed descriptions of X-ray results, and to record all abnormalities. During this learning process, I aimed to enhance my ability to produce valid, precise, and communicable patient records, which is essential to autonomous practice.[22] My history-taking and documentation skills improved progressively, which could be seen in my subsequent clinical notes. For example, in my clinical notes on a nursing home resident who had sustained a wrist injury, I was able to record clearly the details of the incident from the information provided by the patient's carer, as well as the detailed examination findings and radiological results.

Clinical examination skills

Naturally, good history taking directly affects the accuracy of patient examination,[23] as the mechanism of injury provides good hints to the examiner about the potential area of injury.[24,25] I also found that the examiner's knowledge and experience in the management of minor injuries can also influence the examination results. I had time to reflect deeply on a patient I cared for at the beginning of my student ENP practice. This patient had a 1 cm long incision on the volar aspect of the right little finger, midway between the metacarpophalangeal joint and proximal interphalangeal joint skin creases. I initially perceived that the injury was just a superficial cut wound, and planned to discharge her after cleaning and closing the wound. However, it was then discovered that the patient might have a flexor tendon cut, and she was referred to a specialist for further management. This led me to realise that my lack of knowledge and limited experience had prevented me from recognising the severity of the injury. Moreover, I realised that my past experience in wound care had biased my decision. Benner[16] indicated that experienced nurses frequently use intuition, although this decision-making approach is not infallible in all clinical decisions. Thompson[26] discussed how people tend to use close-to-hand information by recalling similar past experiences that

required them to make decisions. However, the data gained from previous incidents are not necessarily appropriate for a current problem. Through reflection and literature review, I have come to understand that a minor cut on the hand can cause serious underlying structural damage,[27-29] of which I was previously unaware. Furthermore, I recognised that it is not safe to make decisions based only on pattern recognition. Before making a decision, I should acknowledge the gaps between knowledge and experience and review the implications of any potential action. This experience taught me to maintain a vigilant attitude in the examination of minor hand wounds, which I have adopted in subsequent patient examinations. In addition, I have also learnt that physical examination plays an important role in evaluating suspected spiral fracture on metacarpals (or phalanges of the fingers), because the facture may not always be identified in radiographs, and accurately diagnosing such a fracture has important implications for the treatment strategy.[24] Thus, I always include physical inspection in cases of hand injury.

I have found that the most challenging aspect of examining bony tenderness is to identify the anatomical positions of the bones. Although I had reviewed many anatomy textbooks, I still found it difficult to identify the positions of certain bones in patients. In an early patient examination, I was even unable to recognise the exact position of the base of the fifth metatarsal, which led me to misinterpret the area of tenderness. I found that the carpal, tarsal, and metatarsal bones were the most difficult ones for me to locate in palpation. This prompted me to search the references of surface anatomy[17,30] and to visit the anatomy laboratory in the university website. I have since attained the skills needed to identify the location of bones by palpation and now know that the fifth metatarsal bone can be localised by a "global approach". Using the skills I learnt and incorporating them in practice have given me greater confidence in the examination and identification of these bones.

Clinical decision making

The capacity to make decisions is one of the defining attributes of autonomous practice.[5,31] My previous decision-making experience was mainly in prioritizing patients at the triage stage. This only required me to focus on and ascertain certain life-threatening conditions from a patient's parameters and history of serious problems. There were times that I did not have a complete idea of the patient's problem or disease. However, I understood that as an autonomous practitioner, my decision-making process would be more complex and involve deciding on appropriate investigations, making diagnoses, developing treatment plans, and providing health care advices. Thus, I knew I needed to develop my decision-making ability to be able to differentiate and prioritize in clinical situation.[32] Furthermore, I realised that a good decision required a balance among research evidence, patient preferences, clinical expertise, and available resources.[33,34] My feelings early on were the same as other novice ENPs who described the experience of making clinical decisions as being like having "the weight of the world" on their shoulders.[21] Even making the decision to order an X-ray was not an easy task, especially at the beginning of my practice as an ENP student. I realised that this was because I lacked confidence in my clinical judgement. Therefore, my decision was influenced by the patient's subjective feelings and I tended to satisfy the patient rather than to base my decision on an objective analysis of the examination findings. As a novice ENP, it was rewarding to observe the decision-making process of experienced practitioners, and I learnt many valuable lessons from their feedback.[35] As I gradually accumulated a certain amount of experience and knowledge, about midway through the course, I felt able to integrate the patient's history and examination findings into my decision-making process. Moreover, I became more confident in my decisions to order X-rays.

I observed that experienced ENPs would incorporate the Ottawa ankle rules into their decisions to order radiological investigations for patients with foot and ankle injuries. I had learnt about the Ottawa ankle rules before beginning the course, but I realised that I did not fully understand them when I began as an ENP student. Therefore, I reviewed articles about these rules and their accuracy in predicting mid-foot and ankle fractures because it seemed sensible for me to

understand this instrument thoroughly before I adopted it in my clinical decision-making process.[36] I later observed the great accuracy of the Ottawa ankle rules in detecting and ruling out ankle and mid-foot fractures,[37] and tried to incorporate them in my own clinical judgements when making decisions in ordering radiography for ankle injury. I found that they were useful in avoiding unnecessary radiography in some cases. At a later stage in my clinical practice, I was verified as competent in requesting radiography. Moreover, I am pleased that I have been able to use this knowledge to give advice to staff nurses about ordering X-rays for patients in triage.

In the early days, I also found it difficult to diagnose certain injuries. For example, scaphoid fracture is notoriously difficult to diagnosis in the early stages following injury, because it usually does not show up in the initial radiological images.[20] However, It is the most commonly fractured wrist bone,[38] and an incorrect diagnosis would be detrimental to patients.[17,24] On one occasion, I came to a different conclusion from my clinical mentor in diagnosing a patient with wrist injury. When examining this patient, I found that she had bony tenderness over the anatomical snuff box and pain in the distal radius on lateral and medial deviations. I initially suspected that she had sustained scaphoid injury, although my clinical mentor eventually diagnosed the patient to be suffering from soft tissue injury. This experience prompted me to learn more about the signs of scaphoid injury in physical examination and the investigations in suspected cases. I did so by undertaking a literature review and attempting to understand and explore the current practice in the examination and diagnosis of scaphoid injury from the information available. I reviewed the different types of physical examinations and their levels of accuracy, and analysed the current evidence on diagnostic tests using critical appraisal check-lists. Summarising the knowledge gleaned from expert opinion and research studies helped me to identify certain important points: that scaphoid injury is difficult to diagnosis, more symptoms should be analysed to ensure a correct diagnosis, and special radiography should be considered in suspected cases. As there will be a poor prognosis for the missed identification of this injury, and to balance the risks and benefits for the patient, I treat all suspected cases of scaphoid fracture cautiously and follow clinical guidelines and current accepted practice of putting the patient's hand in a cast and arranging follow-up.[39] Dowding[36] pointed out that "uncertainty and health care are inseparable". I accept that in the clinical world, things are sometimes unpredictable. The best that I can do is to use the best available methods to detect and reduce risks.

The best health care

Keenan[31] pointed out that individuals who exercise autonomy should be answerable to and responsible for their actions. Before attending the ENP course, I had limited idea about the use of research evidence to provide care and health advice to patients, which is still not the mainstream practice in health care delivery in Hong Kong. Some of our nursing care procedures, as well as patient health care advice, are based on usual practice and ancestral knowledge. In the past, I sometimes carried out certain practices automatically without fully understanding the rationale behind them. For example, the application of ice is a standard routine advice given to patients presenting with soft tissue injury in Hong Kong. However, I was not aware of the importance of this type of treatment or the proper way to apply the ice until an ENP in UK asked me about it. Afterwards, I considered the feedback provided by my lecturer and carried out a literature review and critical analysis of the available information.[34] I tried to understand how to achieve the optimal outcome in the application of ice and the rationale behind it. However, I came to realise that not all health care advice originates from good research knowledge base[40] and there is no consensus on the modes and duration of ice application. I also recognised that in addition to research evidence, I could also make use of information from results of clinical audits, clinical guidelines and protocols, and expert consensus[40] to provide the most appropriate health care advice and treatment to patients. I also came to a greater understanding of the rationales behind interventions, such as the need to elevate injured limbs at an early stage of injury to prevent tissue necrosis and scars caused by oedema, and the need to encourage gentle mobilisation to prevent stiffness of the joints.[41]

Referring patients

The appropriate referral of patients is an important factor in the management of patients whose conditions are beyond my ability to handle. I had the opportunity to attend an Advanced Trauma Nursing Course (ATNC), which updated my knowledge of trauma nursing care and was particularly useful in effectively identifying both minor and major injuries. For example, when I encountered a patient who had suffered high-risk injury, I based my diagnosis on the history, mechanism of injury, and a primary survey to identify the severity of the injury. I learned to recognise some of the major conditions that were beyond my level of expertise and to refer such cases to an emergency doctor for further investigation. In Hong Kong, I did not often discuss patients' conditions with specialists, because this was part of doctors' work. Even in the early stages of my clinical practice as a student ENP, I did not have enough confidence to talk to specialists because I was worried that I could not clearly present patients' problems and answer the doctors' queries. At a later stage, when I had more experience, I felt more ready to have conversations with doctors. The first time, I consulted a hand surgeon over the telephone, I was satisfied with my ability to provide the relevant patient information concisely using appropriate medical terms.[22] Moreover, I was able to act as a patient advocate when discussing with a specialist a particular patient's difficulty for hospital admission. What struck me most deeply during this consultation was that, as a nursing care provider, I was not only caring for the patient's physical needs, but also exercising the unique characteristic of nursing to show concern for the social and psychological needs of the patient and his relatives.[15] This experience allowed me to perceive the unique mixture of nursing and medicine that exists in the NP role.[11]

Learning new skills

An exciting experience for me was performing patient procedures that I had never thought myself capable of, such as the closed reduction of a Colles' fracture, the reduction of a dislocation of the phalanx of a toe, the reduction of a dislocated shoulder, and the application of a cast. In Hong Kong, most of these procedures would have been undertaken by doctors, particularly the closed reductions. When I first performed the closed reduction of a shoulder using a specially designed chair, it amused me to see that it could be performed easily in a simple way with less medication and effort. Moreover, I found that this approach had achieved a higher success rate and fewer complications in a local clinical audit. Although I am still not very skilful in performing these procedures, I have at least proved my capability. I certainly hope to undertake further study to enhance these skills in order to use them to treat patients in Hong Kong.

My ultimate goal in the ENP course was to develop an autonomous role in an A&E department in Hong Kong. Thus, at a later stage in the course, my colleague and I began to develop role boundaries and clinical guidelines for a new service in Hong Kong. In the development of these practice guidelines, I integrated the knowledge I had gained, identified the limitations in our current practice, and arranged the appropriate referrals for certain patient conditions. I also ensured that the care and treatment specified in the practice guidelines were evidence-based.

Summary

This article has presented evidence of my learning progression and the achievements I have made in the management of minor injury patients. By learning and reflection, I have been able to visualise actual clinical practice in a more constructive way. I have also been given the opportunity to further question my own practices and to better understand my strengths and weaknesses. The role modelling and feedback provided by experienced ENPs during the course inspired me to make continuous improvements to my clinical performance. In addition to obtaining technical skills during the learning process, one of the most precious experiences was learning how to make clinical decisions independently. I perceived that this would be essential in enabling me to work as an autonomous practitioner. The knowledge I gained during the course will provide the cornerstone that allows me to successfully make the transition to an autonomous practitioner, and

I am certain that my ability to handle minor injuries will be further promoted by increasing my clinical knowledge and experience. At the end of the course, I had more confidence in my ability to commit to an autonomous role and to develop it in Hong Kong, despite the much anticipated difficulties.

References

1. Marr S, Steele K, Swallow V, Craggs S, Procter S, Newton J, et al. Mapping the range and scope of emergency nurse practitioner services in the Northern and Yorkshire Region: a telephone survey. Emerg Med J 2003;20(5):414-7.
2. Cole FL. Emergency care. Advanced practice nursing in the US: an overview. Emerg Nurs 2003;11(5):22-5.
3. Christofis L. Nurse practitioners: exploration of the issues surrounding their role in Australian emergency departments. Aust Emerg Nurs J 2001;4(2):15-20.
4. Dawood M. Thriving or surviving? Changing the boundaries of ENP practice. Emerg Nurs 2000;8(1):8-10.
5. Pollard K. Searching for autonomy. Midwifery 2003;19 (2):113-24.
6. Byrne G, Richardson M, Brunsdon J, Patel A. An evaluation of the care of patients with minor injuries in emergency settings. Accid Emerg Nurs 2000;8(2):101-9.
7. Choi YF, Wong TW, Lau CC. Triage rapid initial assessment by doctor (TRIAD) improves waiting time and processing time of the emergency department. Emerg Med J 2006;23(4):262-5.
8. Crinson I. Impact of the patient's charter on A&E departments. 2: the emergency nurse practitioner. Br J Nurs 1995;4(22):1321-5.
9. Chang KPK, Wong KST. The nurse specialist role in Hong Kong: perception of nurse specialists, doctors and staff nurses. J Adv Nurs 2001;36(1):32-41.
10. Bamford O, Gibson F. The clinical nurse specialist role: supportive strategies that facilitate role development. Adv Clin Nurs 1999;3:143-51.
11. Brown MA, Draye MA. Experience of pioneer nurse practitioner in establishing advanced practice role. J Nurs Scholarsh 2003;35(4):391-7.
12. Tye CC, Ross FM. Blurring boundaries: professional perspective of emergency nurse practitioner role in a major accident and emergency department. J Adv Nurs 2000;31 (5):1089-96.
13. Snelgrove S, Hughes D. Inter-professional relations between doctors and nurses: perspectives from South Wales. J Adv Nurs 2000;31(3):661-7.
14. Norris T, Melby V. The acute care nurse practitioner: challenging existing boundaries of emergency nurses in the United Kingdom. J Clin Nurs 2006;15(3):253-63.
15. Dugdale A. Practice through reflection. Emerg Nurs 2001; 9(5):31-4.
16. Benner P. From novice to expert. California: Addison-Wesley; 1984.
17. Purcell D. Minor injury: a clinical guide. London: Churchill Livingstone; 2005.
18. Guly HR. History taking, examination, and record keeping in emergency medicine. Oxford: Oxford University Press; 1996.
19. Summers A. Stating the facts. Emerg Nurs 2006;13(10): 14-7.
20. Raby N, Berman L, Lacey G. Accident & emergency radiology: a survival guide. 2nd ed. London: Elsevier; 2005.
21. Shea SS, Selfridge-Thomas J. The ED nurse practitioner: pearls and pitfalls of role transition and development. J Emerg Nurs 1997;23(3):235-7.
22. Walsh M. The nurse practitioner and hospital-based care: setting the scene. In: Reveley S, Walsh M, Crumbie A, editors. Nurse practitioners: developing the role in hospital settings. Oxford: Butterworth-Heinemann;2001. p.3-11.
23. Nursing and Midwifery Council. Guidelines for records and record keeping. London: Nursing and Midwifery Council; 2005.
24. McRae R, Esser M. Practical fracture treatment. 4th ed. London: Churchill Livingstone;2004.
25. American College of Surgeons Committee on Trauma. Advanced trauma life support for doctors: student course manual. 7th ed. Chicago: The American College of Surgeons; 2005.
26. Thompson C. Human error, bias, decision making and judgement in nursing - the need for a systematic approach. In: Thompson C, Dowding D, editors. Clinical decision making and judgement in nursing. London: Churchill Livingstone;2002. p.22- 43.
27. Tuncali D, Yavuz N, Terzioglu A, Aslan G. The rate of upper extremity deep structure injuries through small penetrating laceration. Ann Plast Surg 2005;55(2):146-8.
28. Kulkarni M, Harris SB, Elliot D. The significance of extensor tendon tethering and dorsal joint capsule tightening after injury to hand. J Hand Surg 2006;31(1): 52-60.
29. McKenna D. Hand assessment. Emerg Nurs 2006;14(6): 26-36.
30. Tixa S. Atlas of palpatory anatomy of the lower extremities. New York: McGraw-Hill; 1999.
31. Keenan J. A concept analysis of autonomy. J Adv Nurs 1998;29(3):556-62.
32. Iankova A. The accountability of emergency nurse practitioners. Emerg Nurs 2006;14(6):20-5.
33. Thompson C, McCaughan D, Cullum N, Sheldon T, Raynor P. The value of research in clinical decision-making. Nurs Times 2002;98(42):30-4.
34. Flemming K, Fenton M. Making sense of research evidence to inform decision making. In: Thompson C, Dowding D, editors. Clinical decision making and judgement in nursing. London: Churchill Livingstone; 2002. p.110-29.
35. Pritchard MJ. Making effective clinical decisions: a framework for nurse practitioners. Br J Nurs 2006;15(3): 128-30.
36. Dowding D. Interpretation of risk and social judgement theory. In: Thompson C, Dowding D, editors. Clinical decision making and judgement in nursing. London:

Churchill Livingstone; 2002. p.81-94.
37. Bachmann LM, Kolb E, Koller MT, Steurer J, ter Riet G. Accuracy of Ottawa Ankle Rule to exclude fractures of ankle and mid-foot: systematic review. BMJ 2003 ; 326(7386):417.
38. Daniels JM 2nd, Zook EG, Lynch JM. Hand and wrist Injury: Part I. Nonemergent evaluation. Am Fam Physician 2004;69(8):1941-8.
39. Phillips TG, Reibach AM, Slomiany WP. Diagnosis and management of scaphoid fracture. Am Fam Physician 2004;70(5):879-84.
40. Rycroft-Malone J. Clinical guidelines. In: Thompson C, Dowding D, editors. Clinical decision making and judgement in nursing. London: Churchill Livingstone; 2002. p.148-61.
41. American Society for Surgery of the Hand. The hand: primary care of common problems. 2nd ed. Philadelphia: Churchill Livingstone;1990.