Korean Journal of Health Education and Promotion
Vol. 2 No. 1, 2000, pp. 133-145

A Study on the Development of Guidelines on Visiting Nursing Services for the Management of Hypertension Patients in the Rural Areas of Korea

Moon-Hee Jung* · Myung-Hwa Han**
*Department of Nursing, College of Medicine, Hanyang University, Seoul, Korea
** Department of Nursing, Mokpo Science College, Mokpo, Korea.

〈CONTENTS〉

ABSTRACT

This study aims to develop some guidelines on visiting nursing services for the management of hypertension patients at home in the rural areas of Korea.

Firstly, in-depth interviews were given to the eight staff in charge of visiting nursing services in the rural health centers from June 1, 1999 to August 30, 1999. And then, their five patients with hypertension were under participatory observation. At the same time, literature review was conducted. Through those methods, some preliminary items were derived and the initial guidelines were drawn up. They were referred to ten experts, so that their validity was tested with Delphi Technique. Through the verification of their validity, they were complemented into the final ones.

The total number of the items in the final guidelines was 22. By areas, they could be categorized as follows; eight items as skilled nursing care, five as general nursing care, three as

guidance for diet, two as guidance for exercise, one as hospice care, and one as connection with social welfare services. By methods of activities, 13 items were classified as assessment, two as intervention, two as demonstration, and 17 as explanation.

On the basis of the guidelines, nursing services are recommended to be divided and performed; general nursing activities by nurse aids and skilled nursing activities by public health nurses.

Key Words : Visiting Nursing Services, Hypertension, Rural Area

Ⅰ. Introduction

Since 1995, when the Law on Community Health and the Law on National Health Promotion were enacted, the services provided by health centers have been changed to the comprehensive services performed according to community health programs.

According to the report by the National Statistical Office(1995), hypertension is one of the major causes of death in Korea. It is, therefore, a matter of concern not only in the urban areas but also in the rural areas. What matters here is that while there are much fewer private medical institutions, the proportion of old people who are vulnerable to hypertension is larger in the rural areas. This situation is unlikely to get improved within a short period, so the services provided by health centers are significant to the rural residents in terms of the equality in the utilization of public health care.

Visiting nursing services are often regarded as identical to home nursing services because they share the following similarities; 1) both services are mainly performed by nurses, 2) theories and skills of nursing are applied to both services, and 3) both services are carried out through visiting homes. Despite those similarities, however, there is a striking difference between the two services; visiting nursing services are among the public sector and supervised by health centers, while home nursing services are among the private sector and supervised by private general hospitals. This difference seems to result in the differentiation between the two services in their aims, scope of subjects, contents of activity, and so on. Henceforth, however, the activities in the cooperative sections between the two services are expected to be more activated.

Though most health centers all over the nation have been providing visiting nursing services since 1991, it is not so easy to

estimate what fruits they have obtained from those services. Especially, health centers in the rural areas run short of professional manpower not only in quantity but also in quality. Considering this situation, to increase the efficiency of their services, it is recommendable that they should perform their services according to some guidelines on visiting nursing services. In this regard, this study aims; 1) to develop the guidelines on visiting nursing services in order to meet the demands of the rural residents for public health care, and 2) to provide basic materials which can contribute to the standardization of visiting nursing services supervised by health centers.

Ⅱ. Methods

1.Data Collection

By utilizing the Methodological Triangulation proposed by Duffy(1987) and Kimchi(1991), the data for this study were collected through the following methods.

In-depth interview: In-depth interviews were given to the eight staff in charge of visiting nursing services in the three health centers located in Chollanam Province from June 1, 1999 to August 30, 1999.. Questions were asked in an open-ended and unstructured form; for instance, 'How are you performing your visiting nursing services?', 'What do you think of your services?', 'What are the contents of your managing hypertension patients when you visit their homes?', and so on. All the data were recorded with the consent of the interviewees lest they should be omitted.

Participatory Observation: Among the subjects whom the above interviewees were taking charge of, five hypertension patients were selected. They had been treating themselves at home and registered for the management of hypertension. The activities which the interviewees were performing for them were under participatory observation.

Literature Review: Two kinds of textbooks on nursing for college students and four monographs related to the subject were reviewed in order to search for the items which could reflect the theory and practice.

2. Development of the Initial Guidelines

According to the method introduced by Paterson and Zderad(1976), preliminary items for the initial guidelines were derived from the recorded data. They were numbered and reviewed in comparison with the contents of literature review. And then, on the presupposition of skilled nursing care, the frame of the initial guidelines was drawn up.

3. Verification of Validity with Delphi Technique

The initial guidelines were referred to ten experts - two professors who majored in primary health care and eight nurses in charge of visiting nursing services in health center - and were reviewed twice by them. They were asked to give a score to each item; three points for 'possible', two points for 'possible but difficult because of given conditions' and one point for 'impossible'. They were also asked to offer their opinions to revise and complement the initial guidelines.

4. Completion of the Guidelines

Among the preliminary items, only those which were given average two points or more by at least eight experts were selected as the final items in the guidelines. By reflecting the experts' opinions in the contents of each item, the final guidelines were drawn up and they were presented in the form of tables.

Ⅲ. Results

1. Field analysis and development of the initial guidelines

The staff in charge were performing their field services in the following four consecutive forms.

1) search of subjects

They were searching for the subjects through the various ways; community diagnosis, results of medical examination, requests by residents or social workers, information from hospitals or clinics, assessment in visiting homes, and so on.

2) home visiting

When patients were found, nurses visited their homes and carried out the following activities; checkup of their vital signs, physical assessment, history taking of their medical problems, examination of their ways of life, blood sugar test, gathering of laboratory specimens, evaluation of their social and economic environments, and so on.

3) activities in office

After coming back to health center, nurses decided, according to the results of their assessing the patients, whether they should be registered or referred. Sometimes they were referred to the doctors in the same health center, and other times they were referred to hospitals or clinics for a close examination or hospitalization.

4) follow-up management

It was revealed that one nurse took charge of 600-1100 families and average 200 patients. As such a heavy burden was assigned to nurses, it seemed quite difficult for them to adjust their visiting schedules for follow-up management, not to speak of providing proper services. Their services looked quite formal; they gave the patients some tonics, made an assessment of their health, and gave them some counselling and education on their health problems. And what was worse, the departments in charge of visiting nursing services were also taking charge of additional services such as free

〈Table 1〉 Initial Guidelines on Visiting Nursing Services for the Management of Hypertension Patients at Home(1)

area	preliminary items	methods of activities						evaluation	
		i	ii	iii	iv	v	vi	1	2
A	1. Measure the level of BP of the subjects in the high risk group. → over 210/120mmHg → Refer to hospital. 180-209/110-119mmHg → Visit daily and measure BP.→ Refer. 160-179/100-109mmHg → Visit monthly and measure BP. 140-159/90-99mmHg → Visit bimonthly and measure BP.	●						●	
	2. complaints about dizziness, fainting, nasal congestion, anlgia, loss of appetite, etc. → Measure BP. → over 120/80mmHg → Explain that those symptoms are relievable as time passes. If position change is needed, advise them to move slowly. → If the same symptoms recur even two weeks later, refer them to doctors for controlling doses of medication.	●			●			●	
	3. complaints about blurred vision, edema, anurea, acute pains in the chest, dyspnea, etc → Measure BP. → Refer to doctors.	●						●	
	4.. If BP is maintained at the level of 140/90mmHg or over for 3-6 months despite the improvement of life style. refer to doctors for medication.	●						●	
	8. Check what kinds of BP medicine (β-adrenergic blocker, calcium, channel blocker, angiotension converting enzyme inhibitor, diuretics, α-adrenergic blocker, etc.) patients are taking.	●						●	
B	9. Make sure that patients should inform doctors or nurses of any medicinal side effects (symptoms related to hypertension: dizziness, fainting, nasal congestion, anlgia, loss of appetite, etc.).				●				●
	10. Instruct the patients that they should plan their medication in connection with their important daily activities and follow the plan.			●	●			●	
	11. Stress the importance of taking medicine continuously as scheduled.				●				●

Notes: ●: main method A: skilled nursing care B: general nursing care
i : assessment ii : intervention iii : demonstration iv : explanation v : picture vi : referring
1: observation 2: question

〈Table 1 Continued〉 Initial Guidelines on Visiting Nursing Services for the Management of Hypertension Patients at Home(2)

area	preliminary items	methods of activities						evaluation	
		i	ii	iii	iv	v	vi	1	2
B	5. Explain the risk factors of hypertension to the patients and instruct them that they may lead to the complication in the function of cardiac vessels, brain, or kidney. And stress the chronic state which demands the continuous management and treatment.				●				●
	6. Teach the patients how to use a tonometer and encourage them to record their level of BP daily.			●	●			●	
	7. Instruct the patients that they should inform nurses of complication signs such as headache and fatigue when they feel them.				●				●
	13. Instruct the subjects that they should take sufficient amount of water after hard work or when it is hot as their blood vessels are dilated.				●				●
	14. Advise the smokers to quit smoking or reduce its amount if impossible.				●				●
	15. Instruct the patients that excessive drinking may raise BP and reduce the effect of medication.				●				●
	20. Teach the subjects the methods of managing their stress such as breaking off thinking, listening music and getting exercise, etc.				●				●
	23. Recommend the patients to take less than 2gm of salt a day and discuss the substitutes for salt.	●			●				●
	24. Include the daily recommended amount of potassium, calcium and magnesium in the diet plan.	●			●				●
	25. Prepare the guide books on the diet to reduce saturated fat and provide them for the patients and those who cook for them.	●			●				●
	20. Explain the correlation between being overweight and hypertension to the overweight patients.	●			●			●	●
	21. Recommend the patients to get regular aerobic excercise three times a week.	●			●				●

Notes: ●; main method A: skilled nursing care B: general nursing care
i : assessment ii : intervention iii : demonstration iv : explanation v : picture vi : referring
1: observation 2: question

medical examination for the low-income brackets, round visits to senior centers for diagnosis and treatment, and immunization against hepatitis. This made their visiting more irregular because they could not visit homes during the period when those additional services were performed and monthly reports on them were written. Therefore, health centers need to formulate a system of management by setting up some criteria for home visiting.

In this sense, we established the criteria for

home visiting on the basis of the measurement of blood pressure (on the recommendation of the WHO) and family nursing diagnosis(the priority was decided according to the degree of immobility, the severity of complications or side effects, lack of knowledge on self-management, and so on). We concluded that it was desirable to perform visiting services, according to the severity of patients' disease, in one of the following five cycles; weekly, biweekly, monthly, bimonthly, and every three months.

The time spent in interviewing the staff in charge was average 30 min-an hour per subject. From the recorded data, 20 items by activities were derived and they were numbered. And then, the initial guidelines were drawn up in the form of a table; as shown in Table 1, nursing care- eight items related to direct nursing care and 16 items related to general nursing care- was arranged lengthwise by areas, and methods of activities and methods of evaluation were arranged crosswise.

The frame of nursing care was divided into two areas; the area directly helpful and the area indirectly helpful in solving patients' blood pressure problems, for we expected that such a distinction could induce visiting nursing staff to perform skill-intensive activities.

Methods of activities were classified into six; assessment, intervention, demonstration, explanation, picture, and referring. And methods of evaluation were classified into two: observation and question. The reason was that all of them were the tools with which visiting nursing staff performed their services.

2. Verification of validity and completion of the guidelines

As mentioned above, the initial guidelines were referred to ten experts and reviewed twice by them. On the basis of their opinions, the initial guidelines were complemented as follows.

After the first review by the experts, some areas were renamed and some items by areas were also reclassified.

Firstly, 'direct nursing care' was renamed 'skilled nursing care'. for the latter was thought to reflect its characteristics more appropriately in that it needs professional skill to meet the demands of the residents, unlike the general nursing care which can be performed by patients themselves, volunteers, or nurse aids under the supervision and education of nurses.

Secondly, among the 16 items in the area of 'general nursing care'. four items were reclassified as in the area of 'skilled nursing care'. And three items in 'guidance for diet'

〈Table 2〉 Guidelines on Visiting Nursing Services for the Management of Hypertension Patients at Home (1)

area	items of activities	methods of activities
A	1. Measure the level of BP of the patients in the high risk group. → over 210/120mmHg → Refer to hospital. 180-209/110-119mmHg → Measure BP weekly. → Refer. 160-179/100-109mmHg → Measure BP monthly. 140-159/90-99mmHg → Measure BP bimonthly.	· Measure blood pressure. · Refer.
	2. complaints about dizziness, fainting, nasal bleeding, analgia, loss of appetite, etc. → Measure BP.→ over 120/80mmHg → Explain that those symptoms are relievable as time passes. If position change is needed, advise them to move slowly. → If the same symptoms recur even two weeks later, refer them to doctors for controlling doses of medication.	· Measure blood pressure. · Evaluate pulse. · Refer in case their pulse is out of normal range.
	3. complaints about blurred vision, edema, anurea, acute pains in the chest, dyspnea, etc. → Measure BP. → Refer to doctors.	· Measure blood pressure. · Refer.
	4. If BP is maintained at the level of 140/90mmHg or over for 3-6 months despite the improvement of life style. refer to doctors for medication.	· Measure blood pressure. · Refer.
	8. Check what kinds of BP medicine (β-adrenergic blocker, calcium, channel blocker, angiotension converting enzyme inhibitor, diuretics, α-adrenergic blocker, etc.) patients are taking.	· Explain: What kinds of medicine are you taking now? Those drugs may cause side effects such as dizziness and loss of appetite. In that case, please let me know about that..
	9. Make sure that patients should inform doctors or nurses of any medicinal side effects (symptoms related to hypertension: dizziness, fainting, nasal congestion, anlgia, loss of appetite, etc.).	· Explain: If you feel something such as dizziness, nasal bleeding, powerlessness and loss of appetite when you take drugs, please let me know about that. Those symptoms may be the side effects of blood pressure control drugs.
	10. Instruct the patients that they should plan their medication in connection with their important daily activities and follow the plan.	· Explain: Take the drugs numbered as No.1, No.2, and No.3 after breakfast, lunch and dinner respectively. Remember to take them 30 minutes later after each meal.
	11. Stress the importance of taking medicine continuously as scheduled.	· Explain: You must take BP drugs as scheduled. If you skip them, your blood pressure is likely to be raised. And if you don't take them for a long time, you may have a stroke.

note) A: skilled nursing care

〈Table 2 Continued〉 Guidelines on Visiting Nursing Services for the Management of Hypertension Patients at Home (2)

area	items of activities	methods of activities
B	5. Explain the risk factors of hypertension to the patients and instruct them that they may lead to the complication in the function of cardiac vessels, brain, or kidney. And stress the chronic state which demands the continuous management and treatment.	· Explain: Hypertension develops when blood vessels are so constricted that the heart has problems in circulating blood. Symptoms of hypertension are not always perceived. Some people have headache, fatigue, gasping, insomnia, fainting, anxiety, etc, but others have no symptoms until their other organs(heart blood vessel, brain nerve, etc.) are attacked. Therefore, blood pressure must be controlled through life.
	6. Teach the patients how to use a tonometer and encourage them to record their level of BP daily.	· Explain: The normal range of BP is 110-139/70-89. When your BP drops under 120/80 or rushes up over 210/120. You must take prescribed medicine.
	7. Instruct the patients that they should inform nurses of complication signs such as headache and fatigue when they feel them.	· Explain: If you have frequent headache, fatigue, or dizziness, please let me know about that. Those may be the initial symptoms of a stroke.
	13. Instruct the subjects that they should take sufficient amount of water after hard work or when it is hot as their blood vessels are dilated.	· Explain: If you sweat heavily due to hard work or hot weather, you may get dehydrated, which may cause a drop in your BP and dizziness. In that case, take sufficient amount of water to avoid a drop in your BP.
	14. Advise the smokers to quit smoking or reduce its amount if impossible.	· Explain by taking examples: Smoking causes the constriction of blood vessels, a rise in BP, and a bad effect on the heart. Therefore, you'd best quit smoking. But, if impossible, you'd better reduce its amount to fewer than 10 cigarettes a day and try to reduce more gradually.
	15. Instruct the patients that excessive drinking may raise BP and reduce the effect of medication.	· Explain by taking examples: Drinking has the effect of raising BP. Moderate amount is less than one can of beer, two cups of soju(white liquor), or one glass of whisky a day. But the less you drink, the better it is for the maintenance of your BP.
	20. Teach the subjects the methods of managing their stress such as breaking off thinking, listening music and getting exercise, etc.	· Explain by taking examples: Stress can be eased. Try to find out the ways to ease it. When you feel stress, keep yourself in a comfortable position, take a deep and slow breath repeatedly and relax your body. And then, imagine a glass filled with soda pop. Imagine that all your anxieties and tension will also disappear as all its bubbles float up to the surface and disappear. You'll probably feel that much of your stress is relieved.

Note: B: general nursing care

〈Table 2 Continued〉 Guidelines on Visiting Nursing Services for the Management of Hypertension Patients at Home (3)

area	items of activities	methods of activitie
I	20. Explain the correlation between being overweight and hypertension to the overweight patients.	· Assess patients' eating habits (their menu, recipe, taste, etc.). · Explain: Advise the patients to measure and record their weight daily and recommend them to reduce weight, if it exceeds the ideal one by over 10%. Discuss the safe and effective methods to reduce weight.
	23. Recommend the patients to take less than 2gm of salt a day and discuss the substitutes for salt.	· Explain: Try to reduce the intake of salt gradually by using soup bowls of smaller size or cutting kimchi into small pieces.
	24. Include the daily recommended amount of potassium, calcium and magnesium in the diet plan.	· Explain: To reduce BP, you need to take the daily recommended amount of potassium, calcium, and magnesium. They are rich in orange juice, peach, milk, anchovy, beans, etc.
	25. Prepare the guide books on the diet to reduce saturated fat and provide them for the patients and those who cook for them.	· Explain: Discuss the kinds of food to avoid (eg. food containing caffeine or high calorie.), appropriate recipe, the importance of reading the directions about food carefully, the use of the substitutes for fat, etc.
II	20. Explain the correlation between being overweight and hypertension to the overweight patients.	· Assess age, pulse rate, and medical history. · Explain: Advise the patients to measure and record their weight daily and recommend them to reduce weight, if it exceeds the ideal one by over 10%. Discuss the safe and effective methods to reduce weight.
	21. Recommend the patients to get regular aerobic excercise three times a week.	· Explain: To lower BP, try to get regular exercise 3-5 times a week. Just walking fast for 30-45minutes each time is sufficient.
III	· Select the subjects and perform the service for them.	· Assess the physical, psychological, spiritual and familial aspects of the subjects. · Provide direct nursing care on the basis of the assessment results. · If necessary, refer to social workers or volunteer groups.
IV	· If the BP level is over 210/120. refer to hospital. · If the range of BP level is 180-209/110-119, refer for laboratory examination. · Refer the patients in need of support.	· Assess the economic status and familial resources of the subjects. · Refer the subjects in need of support to social workers for livelihood protection or medical protection. · Collect the information about the patients for management and grasp the details such as their economic status, familial structure, and socio- psychological diagnosis contents. · In case they need funeral protection, refer for the necessary measures.

Note: I : guidance for diet II: guidance for exercise
III: hospice care IV: connection with social welfare services

and two items in 'guidance for exercise' were separated from the area of 'general nursing care', so the number of the items in 'general nursing care' was adjusted to seven.

After the second review by the experts, two areas were added; 'hospice care' and 'connection with social welfare services'. The two areas included one item respectively, so the total number of the items was fixed as 22. They were classified as follows. By areas of 'nursing care', eight items were classified as 'skilled nursing care', five as 'general nursing care', three as 'guidance for diet', two as 'guidance for exercise', one as 'hospice care' and one as 'connection with social welfare services'. By methods of activities, 13 items were classified as 'assessment', two as 'intervention', two as 'demonstration', and 17 as 'explanation'. These classifications were shown in Table 2. In the table, three items which are not numbered are what were added according to the experts' opinions.

Ⅳ. Discussion and Conclusion

Early this year, the Ministry of Health and Welfare issued the guideline on visiting nursing services roughly as follows; Register and manage all the subjects found through the community diagnosis.

However, glancing at the field situation, we can easily see that such a guideline is quite impractical, for visiting nurses are suffering from too heavy a burden of work; on average, each of them takes charge of 200 patients and visits 10-20 homes a day. If we expect them to perform proper services, their load of work should be adjusted to an optimum level; average 50 patients, and 4 homes a day.

At present, visiting nursing services are being performed under the district management system, instead of the case management system. We can understand the reason for adopting the system; as it is almost impossible to place staff by cases under the financially insufficient present conditions, placing staff by districts may be a way of increasing the efficiency of management. Admitting the inevitability of adopting the system, we cannot agree to the policy of the MOHW which regulates even the number of visiting subjects, for it is thought to be an inefficient way of management. Rather, we should give nurses the professional authority to decide on the number and cycle of visiting subjects according to their problems and demands. By doing so, we could raise their morale and switch to the direction of guaranteeing the quality of their services. Furthermore, there is a necessity of developing the guidelines by cases on visiting nurse services, as in this

study. In that case, as we could manage both the performance and evaluation of their services, the aims of the policy could be more easily accomplished.

In general, the quality of services gets deteriorated, especially; 1) when new staff are placed or 2) when, specialty being ignored, nurse aids are appointed to the post in charge. This problem is closely related to the wrong attitude of identifying visiting nursing services with other nursing services in medical institutions the performance of which is absolutely dependent on doctors' prescriptions. However, it requires at least one year of regular education to develop the professional abilities for visiting nursing services, as is seen in the examples of the training course for home nursing care which are specified in the Medical Services Law. If possible, therefore, it would be better to place the qualified staff with professional skills, but if not possible, it is recommendable to reeducate existing nurses and place them. Such reeducation is expected to have the sufficient effect as an incentive. Considering the regional conditions of rural areas, it is desirable to reeducate existing nurses in close cooperation with local colleges.

The cases which visiting nursing staff most frequently dealt with were senile disease, chronic degenerative disease, physical handicap, and so on. And the services which they most frequently performed were physical assessment, guidance for administering medicine, talking as a conversational partner with the patients, counselling, connecting the patients in need with volunteer groups, and so on. There was a considerable discrepancy between these results and the results of Kim(1995) which reported that direct intervention for physical care had been most frequently performed.

Among the things which visiting nursing staff were asking for, uniforms and vehicles for their exclusive use need to be urgently provided, for those are their important means in terms of identification and publicity, and these in terms of service efficiency.

As was pointed out in Lim(1996), what the subjects of visiting nursing services wanted, more than anything else, was material support. In this respect, they should also be regarded as the subjects of social welfare services. Therefore, the programs linking those two services, as in the demonstration project conducted by Korea Institute for Health and Social Affairs(1997), need to be more activated. In that case, not only the guidelines by cases like the ones presented in this study but also the guidelines by function need to be developed.

REFERENCES

Duffy, M.E. 1987. Methodological triangulation: A vehicle for merging quantitative and qualitative research method. *Image : Journal of Nursing Scholarship.* 19(3):130-133.

Kimchi, J, Polivka, B, & Stevonson, J.S. 1991. Triangulation : Operational definition. *Nursing Research.* 40(6):364-366.

Kim, H.J, & Yun, S. N. 1997. *Community Health Nursing.* Seoul. Sumun Publishing Co.

Ko, M.J.1995. *A Proposal on a Management Model Applicable to Visiting Nursing Program for a Low-income Group.* master thesis. School of Public Health Administration, Hanyang University, Seoul, Korea.

Korea Institute for Health and Social Affairs. 1997. *Evaluation on the Management of the Model Welfare Office and a Proposal for Its Improvement.*

Lim, E.S. 1996. *The Analysis of Home Visiting Activities by Public Health Nurses in Health Centers.* master thesis. Graduate School, Yeonsei University, Seoul, Korea.

Paterson, J, & Zerad L. 1976. *Humanistic Nursing.* N.Y, John Wiley & Sons.

Rhee, S.J, Jung, M.H, & Lee, M.S. 1992. *Community and Public Health Nursing.* Seoul. Shinkwang Publishing Co.

The National Statistical Office(1995)

WHO/ISH. 1999. *WHO-International Society of Hypertension Guidelines for the Management of hypertension.*

Yun, S.N, & Park S.A. 1996. A Comparison of Outcomes of Visiting Nursing Service by the Organizational Structure of Health Center. *The J. of Korean Community Nursing.* 7(1):5-17.

Yu, J.S. 1998. *A Study on Recording Management in Public Health Nursing Administration ; Based on Visiting Care Activity in Pyeongtack Health Center.* master thesis. School of Public Health Administration, Hanyang University, Seoul, Korea.