

# Management issues of visiting nursing station business

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**ABSTRACT:** A role of Visiting Nursing Station (VNS) is getting crucial due to recent medical system reformation policy in Japan, to encourage home medical care in place of hospitals. In the future, home health care will be substantial in the aging society and the VNS will play a much more important role. Typical VNS's are operated by so-called "social entrepreneurs" who are highly motivated in pursuing societal value and contributing to the society rather than the pursuit of profits. There are, however, difficulties in management of small to medium scale VNS's. Typical VNS's have a few nurses and a few customers or clients. According to a statistics, most of small to medium size VNS's are operating at a loss. Visiting nursing service is provided through a value net consisting of a medical doctor, a care manager, nurses, and clients and a VNS is one of the players in this value net. Management issues surrounding VNS business include public health system, customer/client retention, and operation process. Public health system restricts financial flexibility and client retention is a topic to be addressed as a service business. In order to investigate issues of small to medium size VNS management, the framework of balanced score card was applied. Issues of customer/clients, process, learning and financial were analyzed according to these four perspectives. Specifically, cost structure of a VNS was analyzed in detail. Combining information obtained from the interview with top management of four typical VNS's located in Kochi, Japan, potentially profitable strategic model was developed.

**KEYWORDS:** visiting nursing station, small business, balanced score cards, strategy map

## 1. INTRODUCTION

### 1.1 Visiting Nursing Station

A visiting nursing station (VNS) is an organization which dispatches a public health nurse, a nurse, an associate nurse, a physical therapist, an occupational therapist, or a speech therapist to patient's home for medical treatment under guidance of a doctor. The VNS also cooperate with hospitals in order to provide variety of consulting services including hospitalization procedures, so that patients/customers spend comfortable and peaceful convalescence days. Japanese Medical law was amended in 2006, where remuneration for diagnosis and treatment was reformed placing much emphasis

on home care. It resulted in abolition of medical treatment type sickbed group, hospitalization period reduction, and promotion toward home care. Medical offices to support medical treatment for home care were newly established. The home care support medical office plays a core role for home care system. It cooperates with hospitals, clinics, visiting nursing stations and provides twenty-four hour support to dispatch doctors to home of patients.

The home care support medical office is required to show a statement which guarantees the office's capability to provide home visit services during twenty-four hours according to request from

patients.

Typical VNS's are operated by so-called "social entrepreneurs" who are highly motivated in pursuing societal value and contributing to the society rather than the pursuit of profits. In the future, home health care will be substantial in the aging society and the VNS will play a much more important role. Clayton Christensen mentioned in his article "the innovator's prescription", that health care in patients' home is a kind of the disruptive innovation from the point of cost of venue and complexity of diagnosis and treatment [1], which suggested potential importance of VNS in the future.

There are, however, difficulties in management of small to medium scale VNS's. Typical VNS's have a few nurses and a few customers or clients. Anzai investigated problems in visiting nursing station management through a comprehensive survey and suggested weakness of financial administration capability of the station managers [2]. According to a statistics, most of small to medium size VNS's are operating at a loss. So the objective of this research work is to investigate a profitable management model for small-to-medium size VNS's

### 1.2 Present financial situation of VNS's

Financial data for VNS is available from the national association for home-visit nursing care. Figure 1 and Figure 2 show distribution of the VNS's which are operating at a loss classified as a number of nurses and as a number of patients, respectively [3]. In the case of VNS with fewer than three visiting nurses, almost half of VNS's show a loss. This is also true for the case classified as number of patients and around 70% of VNS's are in the red if the patients are less than 20. It is clear that small-to-medium size VNS's have serious management issues.

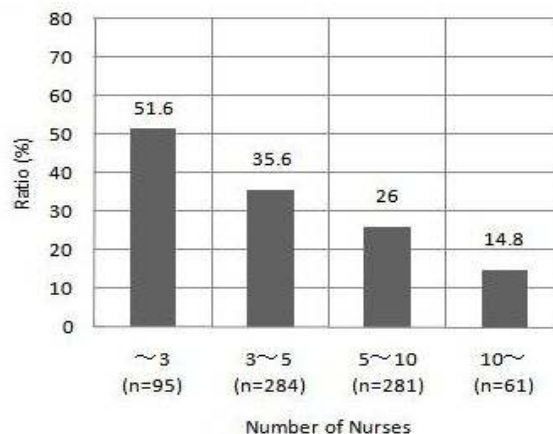


Fig. 1 Ratio of VNS's operating at a loss (Number of nurses)

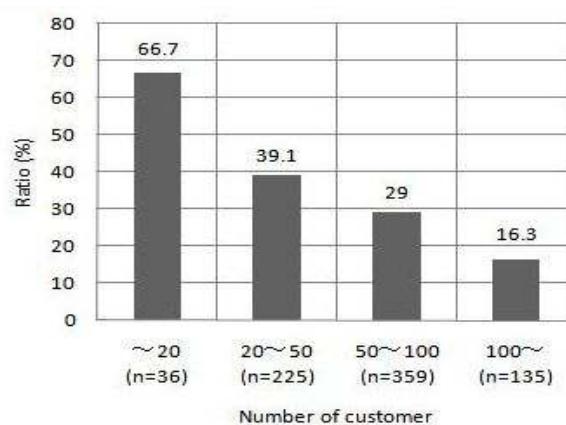


Fig. 2 Ratio of VNS's operating at a loss (Number of customer)

## 2. Structure of visiting nursing station business

Business structure of visiting nursing service is shown in Figure 3. A customer makes an application to VNS for visiting nursing service. A nursing

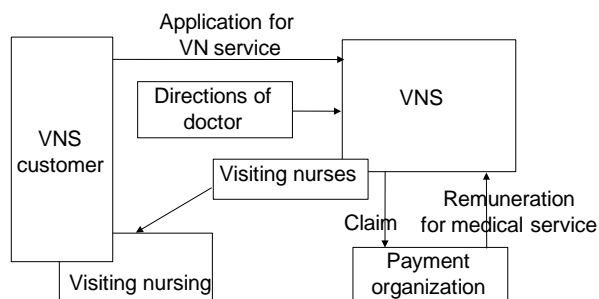


Fig. 3 Structure of visiting nursing service

instruction is to be issued by the family doctor. A care plan is to be provided by the care manager if the customer is eligible for a nursing insurance. When

the process is completed, visiting nursing service is approved and home care service will start. Flow of cash in this business structure is as follows. A customer pays part of diagnosis and treatment fee to the VNS. The individual payments are 10% and 30% in the case of nursing insurance and medical insurance, respectively. The VNS requests reimbursement to the insurance payment fund for the rest of diagnosis and treatment remuneration, which are 90% and 70% for nursing insurance and medical insurance, respectively. After review process of the paper works, the remuneration is paid to the VNS.

Since nursing insurance has the first priority over other insurances, a customer applies nursing insurance first. However, medical insurance is to be applied when the customer is suffering end-stage cancer, or other serious sickness which is acknowledged by the Minister of Health, Labor and Welfare or the customer is in the stage of acute exacerbation (within 14 days). If the patient is not covered by care insurance, medical insurance is applied.

### 3. Management issues

#### 3.1. Medical insurance system.

Medical institution receives remuneration for the diagnosis and treatment based on the point system. All medical treatments and medications covered by public insurance have been assigned points representing the relative fee. The calculation base is ten yen per point. When a customer receives plural medical treatments and total points assigned are 1000, for example, the medical fee is 10000 yen. In the case of the nursing care insurance system, the system is managed by local governments. So the service depends on the financial situation of the local governments. Typical point assignment for both medical insurance and nursing care insurance as of January 2009 is shown in Table 1. It is obvious

Table 1 Point assignment  
(As of January 1, 2009)

	Long-Term Care Insurance	Medical Care Insurance
Method of fee setting	Visit number of times by a time unit (restriction)	Establish regardless of the number of times of a visit
Fee structure	Under 20 minutes 285units Under 30 minutes 425units	Visiting Nursing basic medical expense 1 5300 yen (A week of until 3rd day)
Main body part	Under 60 minutes 830units Under 90 minutes 1188units Assistant nurse: 0.9 times	6300 yen (A week of after 4st day) + Visiting Nursing management medical expense Beginning of month 7050 yen 2~12day 2900 yen
		Visiting Nursing basic medical expense 2 (Person who has mental disability, moreover the person who has entered to institution) 1600 yen (1~3hours at 1 times) 400 yen (1hours Extension)
Addition part	Early morning and nighttime addition 25% Plus Midnight addition 50% Plus	
	Special area Visiting Nursing addition 15% Plus(at 1 times)	Special area Visiting Nursing addition Basic medical expense 50% Plus
	Emergency Visiting Nursing addition 540 units	Emergency Visiting Nursing addition 2650 yen (at 1day)
		Intractable disease plural visiting addition 4500 yen(at 2nd), 8000 yen(at 3rd)
		24-hour connection structure 2500 yen(at 1month)
	Special management addition 250 units	Severely ill patients management addition 2500 yen(at 1month)
		Regional alliances hospital discharge cooperation guidance addition 4200 yen(at 1month)
	Terminal addition 1200 units	Visiting Nursing terminal addition medical expense 12000 yen

that VNS's cannot receive any remuneration for treatments assigned 0 point under this insurance system.

### 4. Analysis of VNS issues by Balanced Score Card (BSC) framework

#### 4.1 The framework of BSC

In order to analyze management issue of VNS, the balanced score card framework was utilized. Originally, the BSC has four perspectives of "financial", "customer", "internal business process", and "learning and growth" [4]. Points of discussions of the four items are as follows.

a) Financial perspective: This is to analyze potential profitability of VNS business as a function of major parameters like number of nurses, number of visits, and point assignment of the insurance

systems.

b) Customer perspective: This is for increasing customer satisfaction by providing nursing service with high quality. Specifically, customers who chose small to medium size station have tendency to place great importance on rich communication between customer and the visiting nurse.

c) Internal perspective: The efficient operation process increases efficiency of visiting service, and it also improves employee satisfaction

d) Learning and growth perspective: This is to have autonomous nurses or to rear visiting nurses with autonomy.

#### 4.2 Profit simulation for VNS's

As mentioned in Section 1.2, many of VNS's are in poor financial situation. A simplified financial model was developed to investigate profitability of VNS's as a function of number of visiting nurses.

Following parameters are chosen for the simulation:

Period: 1 month (4 weeks)

Number of full-time visiting nurses: (3-9 people)

Nurse Salary: 369,000 yen [5]

Average home stay hours per visit: (65 minute)

Income for Nursing care insurance:

$$\text{Nursing care insurance point} \times \text{number of visits/days} \times \text{number of nurses} \times 6\text{days} \times 4 \times \text{ratio of nursing care insurance}$$

Income for medical insurance:

$$\text{Medical insurance point} \times \text{number of visits/days} \times \text{number of nurses} \times 6\text{days} \times 4 \times \text{ratio of medical insurance} + 7050 \times \text{number of user} \times \text{ratio of medical insurance}$$

Revenue is sum of both income from nursing care insurance and medical insurance. Almost all the cost comes from personal expense and total cost is number of nurses multiplied by salary of a nurse. The profit can be calculated from the revenue and cost. Average ratio of medical insurance over total

insurance is reported to be around 30%. Profit was simulated as a function of number of visiting nurses as shown in Figure 4. The lowest line is for the

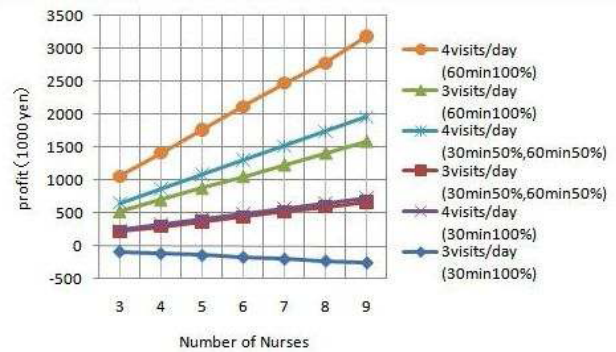


Fig. 4 Profit simulation result

case of three visits per day and all staying time is 30 minutes. The VNS loses money only in this case, which means that VNS business has potential to make profit.

### 5. Case studies

#### 5.1 Outline of cases and operation logic tree

Since VNS's located in the regional area generally has business difficulty as opposed to the VNS's located in big town, three VNS's in Kochi prefecture was selected and investigated. One VNS "A" is relatively large and located in downtown Kochi, the other two "B" and "C" are small sized VNS's and located in downtown and rural area, respectively. Outline of the three target VNS's is summarized in Table 2. Operations in the VNS's can be described

Table 2 VNS summary

	VNS A	VNS B	VNS C
Location	Downtown	Suburb	Downtown
Number of Nurses	5	3	3
Additional Function	Hospital & Visiting rehabilitation station	Care support business	Care support business & Helper station

as a logic tree shown in Figure 5. Based on the operation logic tree, questionnaire was formulated

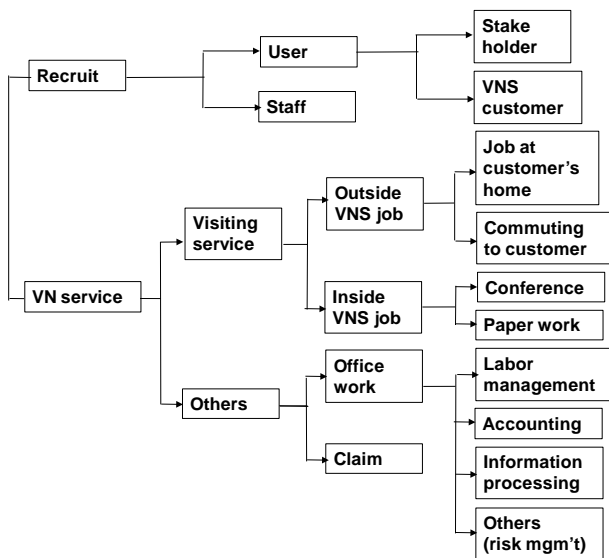


Fig.5 Operation logic trees of VNS

with respect to the following topics.

- Q1. Stake holder
- Q2. VNS customer
- Q3. Staff
- Q4. Job at customer's home
- Q5. Commuting to customer
- Q6. Conference
- Q7. Preparation and Record
- Q8. Labor management
- Q9. Accounting
- Q10. Collection of information
- Q11. Other (Risk management)
- Q12. Customer complaint

### 5.2 Comparison on size of VNS's

Large VNS "A" and small VNS's "B" and "C" are compared. There were significant differences in labor management, conference operation, collection of information and risk management policy. Clearly, large VNS provides better environment for employees to perform his or her job. Nurses can concentrate on their job. Small VNS does not have any disadvantage with respect to revenue since remuneration for the diagnosis and treatment is based on the point system which is controlled by the

government. In other words, there is no price competition among the VNS's with variety of size.

### 5.3 Effect of additional function of VNS's

VNS's "B" and "C" have another function of home-visit nursing care which dispatches home helpers in addition. Customers for home helpers are not likely to be a customer for visiting nursing station since the Care Manager selects the VNS's. So, having home-visit nursing care does not help to increase number of customers.

### 5.4 Location of VNS's

VNS "B" is located in rural small town while VNS "C" is located in relatively large town. There are differences in stake holders and customers. Being located in a large town is not always an advantage. VNS "B" is in good shape because of less competition even if total amount of market is smaller.

### 6. Strategy Map

A strategy map proposed by R. Kaplan is a useful tool to show the cause-and-effect linkage of the objectives and measures across the four perspectives which was mentioned earlier.

Since cost structure and pricing scheme of VNS business model are very simple, a key component which determines the profitability is number of customer visits. It is required to satisfy both the VNS customer itself and the home caregiver. It was clear from the interview that VNS users had certain satisfaction to VNS service provided. Communication among a user, a home caregiver and a visiting nurse were pretty well and complaints were very few. In addition, payment refusal was less than a few percent. Time of staying at customer's house was close to national average. The visiting nurses are considered to have reasonable service quality which results from nursing skill and

information process capability. Collection of information about user and related people is crucial for the VNS business. This information is shared each other by conferences which are held periodically at the visiting nurse station. Good

[2] Hitomi Anzai, et al. “The problem and theme of management in the visit nursing station”, Bulletin of Fukushima School of Nursing, pp.57-71, 2004.

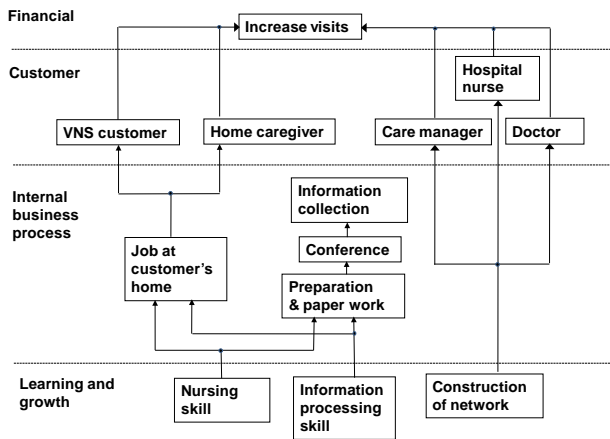


Fig.6 Strategy Map

communication and networking skill with care managers contribute to increase of customer visits. From these observations, the strategy map shown in Figure 6 for profitable VNS management was developed.

## 7. Conclusion

Most of small to medium sized scale VNS' have serious management issues in terms of profitability. The profitability of VNS was simulated as a function of number of nurses utilizing average parameters and possibility of profitable operation was shown under the current restriction with respect to point system. Interview with management of three VNS's located in Kochi prefecture clarified management issues with respect to size of VNS's, adding home helper service and location. The VNS management model was developed in the shape of the strategy map.

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