Asian Journal of

HUMAN SERVICES

PRINTED 2020.0430 ISSN2188-059X
PUBLISHED BY ASIAN SOCIETY OF HUMAN SERVICES

APRIL 2020
VOL. 18

ASIAN SOCIETY OF HUMAN SERVICES

Human Services

DOI: http://dx.doi.org/10.14391/ajhs.18.74
Asian Journal of Human Services, VOL. 18:74-80

SHORT PAPER

Medical and Care Collaboration between Nurse and Care-worker in a 'Kantaki' Setting;
Time-sampling Study

Yumi FUKUYAMA [1)] Maiko KIDO [2)] Koichi SHINCHI [1)]
Akiko AKIYAMA [3)]

1) Faculty of Medicine, Saga University, Japan
2) General Incorporated Association Life Navigate, Japan
3) Faculty of Health Science, Kio University, Japan

ABSTRACT

Background: An increasing number of clients with special health care needs receive long-term mechanical ventilatory support at home. This study presents the types of care given to old-aged clients with special health care needs in a Japanese 'Kantaki' home-care institution.

Methods: The care given was followed closely using 24-hour audio-video recording.

Results: The type of care given by the nurse alone was mostly medical care, by the care-worker alone was assistance in eating, toilet, and medical care, and the care given by both together was bathing.

Conclusion: Findings are first direct evidence quantifying the type and respective amounts in such a care home for the old-aged persons with special health care needs.

＜Key-words＞
home care, kantaki, group home, home mechanical ventilation, special health-care needs.

Received
March 3, 2020

Revised
April 8, 2020

Accepted
April 13, 2020

Published
April 30, 2020

yumifuku@cc.saga-u.ac.jp (Yumi FUKUYAMA; Japan)

Asian J Human Services, 2020, 18:74-80.

DOI: http://dx.doi.org/10.14391/ajhs.18.74
Asian Journal of Human Services, VOL. 18:74-80

I. Introduction

Japan has the highest proportion of old-aged people in the world and has an increasing number receiving long-term home mechanical ventilation (HMV) in their home.[1] Accordingly, the Japanese Nursing Association has strongly promoted multifunctional long-term care in small group homes known as Kango Syokibo Takinou gata Kyotakukaigo abbreviated as 'Kantaki', which now employ both nurses and care-workers in order to provide comprehensively care (including daytime care, visiting the client at their own home, and overnight service) for clients living at their own home with special health-care needs [2] Basically, the nurse is trained and registered as having a national qualification in the medical field, whereas the care-worker has a national qualification in the welfare field. They are differently trained and different qualified. Nurses and care-workers are expected to collaborate with each other in delivering care to a client with special health care needs such as HMV in a Kantaki. However, the collaboration (helping each other to carry out a care task together) required or delivered is not yet clear. Moreover, the types of care required have not yet to date been clearly identified and categorised. The findings from this pilot study identified and categorised the type of care required by old-aged clients with HMV – including both daytime and overnight care.

II. Methods

1. Participants

We selected one Kantaki which has been rated as a good service provider of special health-care needs by a government official report[3] which is the first guidelines report that sets out a model for external and internal evaluation of Kantaki. During this study period, this local Kantaki accepted four HMV clients in overnight service. Of these, we were obtained three clients and family the informed consent for audio-video (AV) recording in order to discover the types of collaboration and how much collaboration was involved between the nurses and care-workers delivering these services. The remaining one of these four declined citing shyness.

2. Data Collection

Data were collected using 24-hour-AV recording of three participants using Kantaki day-care and overnight services. We focused on recording everything within a 1-meter radius around the client throughout the 24 hours' study period. Other data were collected with consent from long-term care insurance records and included age, sex, main disease, type of home mechanical ventilation, long-term care grade[4], rank of dementia[5], and activities of daily living (ADL)[5]. We collected all data during December 2016.

DOI: http://dx.doi.org/10.14391/ajhs.18.74
Asian Journal of Human Services, VOL. 18:74-80

3. Care Classification

The type of care being delivered was categorised according to the care code [6-7] of the long-term care insurance system in Japan. (The types of care have a code number from 111 to 999, and these are distributed within nine larger categories of care.) The Clock Model with time sampling was used in this study. The continuous 24-hours AV recording was closely investigated, and the type of care delivered in each one-minute segment was noted, by each of two independent trained expert observers, who are the authors of this report. At the same time it was noted who delivered the care;- the nurse, the care-worker, or both in collaboration.

4. Ethical Considerations

Permission for this study was obtained from the Ethics Committee of Saga Medical School Faculty of Medicine, Saga University (No: 28-12). Written informed consent was obtained from each participant, and each family also gave informed consent to participate, and agreed to the findings being published. The storage and playback of the AV recording was strictly controlled in cooperation with the administrative management staff of the Kantaki. For the awareness of other clients and their families using the Kantaki, we posted a notice describing this study, asking for their kind consideration, with our contact details, together with the implementation period, inside the Kantaki.

III. Results

1. Overview of the Direct Care

Table 1 shows basic characteristics, overview of the direct care (assistance delivered within one metre around the client). Case-A with chronic obstructive pulmonary disease (COPD) was receiving tracheostomy positive pressure ventilation (TPPV) therapy, and findings showed direct care for 291 minutes; Case-B also with COPD was receiving non-invasive positive pressure ventilation (NPPV) therapy, and received the direct care for 296 minutes; and Case-C with cervical spine injury was receiving TPPV therapy, and direct care for 375 minutes.

DOI: http://dx.doi.org/10.14391/ajhs.18.74
Asian Journal of Human Services, VOL. 18:74-80

<Table 1> Characteristics, Overview of the Direct Care

characteristic \ client		A	B	C
Age / yrs		75	74	75
Sex		male	female	male
Main Disease		Chronic Obstructive Pulmonary Disease	Chronic Obstructive Pulmonary Disease	Cervical spine injury
Types of Home Mechanical Ventilation		Tracheostomy Positive Pressure Ventilation	Noninvasive Positive Pressure Ventilation	Tracheostomy Positive Pressure Ventilation
Long-term care grade*		care-level 5	care-level 3	care-level 5
Rank of dementia†		Ⅳ	Ⅲ	none
ADL‡		C1	B2	C1
Recording Start / date time		2016/12/20 9:50 am	2016/12/21 9:52 am	2016/12/15 10:11 am
Recording Finish / date time		2016/12/21 9:50 am	2016/12/22 9:52 am	2016/12/16 10:11 am
Total of Direct Care / mins		291	296	375
Distribution over the 9 function categories§ / mins	1.Bath, Dressing, Personal appearance	58	73	41
	2. Transfer, Movement	40	21	28
	3.Food, Nutrition and Fluid replacement	39	55	36
	4. Bathroom	27	25	5
	5. IADL support	32	33	44
	6. Social life support	0	6	0
	7. Behaviour problem	0	0	1
	8. Medical care	95	75	181
	9. Rehabilitation	0	8	39

*: the long term care grade is an index, based on the Long-term Care Insurance System of Japan, which indicates the needs for care services.[4] The greater the number, the longer it is expected to take care for the aged client (Not certified, support level 1 or 2, care level 1 to 5)

†: the rank of dementia is an index, based on the Long-term Care Insurance System of Japan.[5] Aged with dementia is set to zero (no dementia), or given as rank I to Ⅳbased on the symptoms and behaviors observed in dementia.

‡: the rank of ADL is an index, based on the Long-term Care Insurance System of Japan.[5] ADL of Aged is divided into rank J to C based on the ADL status.

§: Classification of care based on the Care Code 2006, Long-term Care Insurance System, which is divided into 9 function categories.[6]

DOI: http://dx.doi.org/10.14391/ajhs.18.74
Asian Journal of Human Services, VOL. 18:74-80

2. The Type of Direct Care, and Collaboration between Nurse with Care-Worker

Table 2 shows the type of direct care. The type of direct care by the nurse only was mostly medical care (63.4%), by the care-worker only was administering food, nutrition and fluids (27.2%), and collaboration was bathing, dressing, and personal appearance (55.6%).

<Table 2> The Type of Direct Care, and Collaboration between Nurse with Care-Worker

	provider nurse/care-worker, and total duration for 3 clients							
	Nurse		Care-Worker		Collaboration		Others	
Type of Direct Care	mins	(%)	mins	(%)	mins	(%)	mins	(%)
1. Bath, Dressing, Personal appearance	19	(5.1)	39	(12.1)	114	(55.6)	0	(-)
2. Transfer, Movement	6	(1.6)	28	(8.6)	37	(18.0)	18	(30.0)
3. Food, Nutrition and Fluid replacement	38	(10.2)	88	(27.2)	1	(0.5)	0	(-)
4. Bathroom	1	(0.3)	61	(18.9)	4	(2.0)	0	(-)
5. IADL support	65	(17.2)	39	(12.1)	3	(1.5)	2	(3.3)
6. Social life support	0	(-)	0	(-)	0	(-)	0	(-)
7. Behavior problem	1	(0.3)	0	(-)	0	(-)	0	(-)
8. Medical care	237	(63.4)	68	(21.1)	46	(22.4)	0	(-)
9. Rehabilitation	7	(1.9)	0	(-)	0	(-)	40	(66.7)
Total mins /24hrs	374		323		205		60	

IV. Discussion

This study identified what kind of direct care and for how long was actual given in practice to old-aged clients with HMV in a Kantaki. However, several limitations exist in this study. First, we did not examine differences in care due to years of experience between nurses and care-workers. Second, we only recorded 24 hours one time; it is necessary to record the same clients several times to increase confidence in the reproducibility of the care content.

The Kantaki delivering seamless and flexible care near their house is convenient for a client with special health care needs and for their family [8]. The previous study revealed the Kantaki was concerned over how to improve collaboration among their staff [9,10]. However, there are no baseline data on what constitutes collaboration in this setting, not any report on the actual practices of a nurse and a care-worker, and the care given has not yet to date been categorised clearly in any Kantaki study.

This research is the first to present baseline data to understand what is the role of the nurse and care-worker in the Kantaki, the direct care time, and the care content.

DOI: http://dx.doi.org/10.14391/ajhs.18.74
Asian Journal of Human Services, VOL. 18:74-80

Acknowledgment

The authors thank certified home-visiting nurses M. Baba and Y. Ueno for useful discussions, and a Kantaki staff for their professional cooperation. This study was supported by JSPS KAKENHI Grant Number 18K10538. We remain indebted to all the participants and their families, for their kind cooperation.

References

1) Miyachi T (2015) Home Mechanical Ventilation in Japan: A National Survey. *Home Health Care for the People with Intractable Diseases,* 20(12), 21-24. (in Japanese)
2) Sakamoto S (2012) Japan Nursing Association News Release: Promotion of Multifunctional Long-Term Care in a Small Group Home Based on Visiting Nursing. https://www.nurse.or.jp/jna/english/news/pdf/2012nr_8.pdf (Accessed April 8, 2020)
3) Mitsubishi UFJ Research and Consulting (2015) An Establishment Reports of a Research Project on the Management Status of Kantaki. (in Japanese) https://www.murc.jp/uploads/2015/05/koukai_140518_c4_1.pdf (Accessed April 8, 2020)
4) Ministry of Health, Labour and Welfare (2002) Long-Term Care Insurance System of Japan; Procedure for Use of Long-term Care Services. https://www.mhlw.go.jp/english/topics/elderly/care/2.html (Accessed April 8, 2020)
5) Ministry of Health, Labour and Welfare (2009) Administrative Document Number 0930-02: About Guidance for Filling Out Certification Survey form, Physician Opinion Statement and Diagnostic Criteria for Specific Diseases. (in Japanese) https://www.mhlw.go.jp/web/t_doc?dataId=00tb6469&dataType=1&pageNo=4 (Accessed April 8, 2020)
6) Ministry of Health, Labour and Welfare (2006) The Authorization Committee of Long-term Care Law. Care Code 2006: document No.3. (in Japanese) https://www.mhlw.go.jp/shingi/2006/12/s1206-7.html (Accessed April 8, 2020)
7) Tsutsui T & Higashino S (2011) Development of Tsutsui Total Care Code: Revealing the Nature and Quantity of Care Services Provided in Japan Fields of Nursing Care, Long-term Care, and Care Services for Children. *Review of Management and Information Shizuoka Prefectural University,* 24(1), 23-49.
8) Japan Visiting Nursing Foundation (2012) Survey and Research Report on The Actual Situation of Family Caregivers Caring for Aged with Needed Medical Care. (in Japanese) https://www.jvnf.or.jp/23kazoku.pdf (Accessed April 8, 2020)
9) Katahira N, Maruo S & Ogawa T (2019) Strengths and Problems of Nursing in Multifunctional Long-term Care in a Small Group Home and Home-visit Nursing: A Literature Study. *Journal of Primary Care Association,* 42(1), 32-39. (in Japanese) doi: 10.14442/generalist.42.32.

DOI: http://dx.doi.org/10.14391/ajhs.18.74
Asian Journal of Human Services, VOL. 18:74-80

10) Katahira N & Tsukasaki K (2016) Nursing Care in Multifunctional Small Group Homes Providing Day, Visiting and Overnight Services for Older People Living at Home. *International Journal of Nursing Practice,* 22: 605-615.
doi: 10.1111/ijn.12482.

Asian Journal of Human Services

EDITORIAL BOARD

Asian Journal of Human Services

VOL.18 April 2020

Presidents | Masahiro KOHZUKI & LEE, Sun Woo

Publisher | Asian Society of Human Services
#1Floor Ohara Bill, 2-11-5, Takezaki-Town, Shimonoseki-City, Yamaguchi-Prefecture, 750-0025, Japan
E-mail: ashs201091@gmail.com

Production | Asian Society of Human Services Press
#1Floor Ohara Bill, 2-11-5, Takezaki-Town, Shimonoseki-City, Yamaguchi-Prefecture, 750-0025, Japan
E-mail: ashs201091@gmail.com

ASIAN JOURNAL OF HUMAN SERVICES
VOL.18 April 2020

CONTENTS

ORIGINAL ARTICLES

Structure of Care Managers' Approaches to and Awareness of "Nutritional Improvement" for Care-dependent Older People
Yuko FUJIO et al. p.1

A Multi-population Analysis of a Self-care Scale for Menstrual Pain: Causal Relationships between Snacking and Menstrual Pain
Eriko YAMAMOTO p.18

Issues in Spousal Bereavement Support for Elderly Men in Japan
Makiko YAMAUCHI et al. p.33

A Fundamental Study on Health Anxiety in the Daily Life of Visually Impaired People Living in the Community and the Actual Situation of Patient Acceptance Systems at Medical Institutions
Keiko OMOTO p.48

Development of the Disability Awareness Program (DAP) scale: Centering on the Content Validity Verification
Mamiko OTA et al. p.63

SHORT PAPERS

Medical and Care Collaboration between Nurse and Care-worker in a 'Kantaki' Setting: Time-Sampling Study
Yumi FUKUYAMA et al. p.74

Preliminary Study on Verb Acquisition Status and Related Factors in Children with Down Syndrome
Haruna OKAMIYA et al. p.81

Experience of Reflecting Process in Graduate School for Clinical Psychologist
Norimasa ITAKURA et al. p.92

CASE REPORTS / ACTIVITY REPORTS

Analysis of Difficultiens faced by Home Health Nursing Practicum Instructors
Reiko HATAKEYAMA et al. p.100

UDL using ICT for Inclusive Learning; Learning Support for Students with Diverse Learning Styles, Including Students who Need Special Support
Mitsuyo SHIMOJO et al. p.112

Published by
Asian Society of Human Services
Yamaguchi, Japan