

# Factors related to catheter blockage in home nursing care patients with long-term indwelling catheters



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## Introduction

There are three characteristics of patients with indwelling urinary catheters undergoing home nursing care:

①They use the catheter for a long time. ②They develop various symptoms and complications, such as urinary tract infection and catheter blockage. ③Catheter blockage results in the need for emergency care.

→Visiting nurses must prevent and manage catheter blockage.

## Objective

To identify the causes of catheter blockage in home-bound patients with long-term indwelling urinary catheters.

## Materials & Methods

**Participants:** 81 patients using long-term ( $\geq 6$  months) indwelling urinary catheters while receiving home-visit nursing care

**Data collection:** Questionnaire administered to nursing managers at 18 home nursing care stations

**Questionnaire:** Patient attributes, catheter management, handling of catheter blockages

**Data collection period:** From 24 October to 22 November 2014

## 1. Characteristics

Sex	35 men 46 women
Mean age	81.64 years (60–102 yr)
Mean duration of catheter use	37.78 months (6–213 mo)

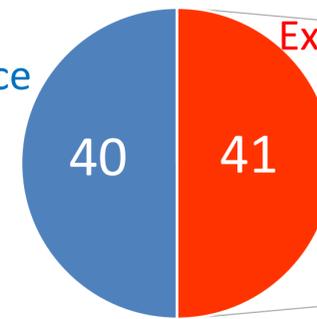
## 3. Factors associated with catheter blockage

### 1) Comparison between blockage and non-blockage groups

Factors	Blockage (n = 29)	Non-blockage (n = 52)	p value
0 (Not at all)    1 (Occasionally)    2 (Mostly)    3 (Always)			
Checking of urine volume by caregiver	2.5 ± 0.9	2.9 ± 0.5	0.012
Checking of catheter flexion and distortion by caregiver	2.1 ± 1.0	2.5 ± 0.8	0.024
Checking of urinary tract infection symptoms by caregiver	1.9 ± 1.0	2.4 ± 0.9	0.033
Abdominal pain	0.4 ± 0.5	0.2 ± 0.5	0.041

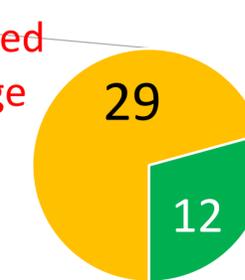
## Results

Did not  
experience  
blockage



## 2. Occurrence of catheter blockage

Experienced  
blockage



Blockage

m=3.48 times (1–14 times)

Non-blockage

During the 6-month period from Apr to Sep 2014

From receiving home nursing care to present time

### 2) Analysis of blockage frequency in the blockage group

Factors	Frequency of catheter blockage	p value
Decreased urine volume	Yes 7.0 ± 4.5 times No 2.5 ± 1.7 times	0.006

n = 29

## Discussion

These results can be used to devise an optimal catheter management method for reducing catheter blockage. First, nurses should support family members in the performance of catheter management. Second, increasing water intake to promote urine output is the most important factor in catheter management.

## Conclusion

The results of factor analysis between the blockage and non-blockage groups showed that catheter management by the caregiver was a significant factor.

Blockage frequency was significantly associated with a decreased urine volume.

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