Congruence between preferred and actual place of death and its relationship with quality of dying among terminal-ill cancer patients: a multicenter prospective cohort study

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❖ Background: Place of death (POD) is a culture-specific issue which is various in different social context and health care system worldwide. The study in East Asia and its relationship with quality of dying (QOD) is insufficient.

❖ Aim: To investigate the relationship between QOD and congruence of preferred and actual POD in a universal health service scheme in Taiwan.

❖ Methods: A prospective cohort study was conducted in three tertiary hospitals in Taiwan. We enrolled the terminal-ill cancer patients who was admitted to palliative care units (PCU) and assessed their comorbidities, preferred POD, symptoms, functional status, and situation of physician-patient communication. Actual place of death and quality of dying were checked during the follow-up. Multivariate analyses was applied for identifying the factors influencing the congruence of preferred and actual place of death. The score of quality of dying in different groups were evaluated and compared.

❖ Results:

341 cancer patients were identified for analysis when admission into the PCU (Table 1).

Table 1. Baseline characteristics of the patients		
	N=341	(%)
Age, years (mean, SD)	66.6±13.8	
Sex, female	158	(46.3)
Primary cancer		
Brain	9	(2.6)
Head/neck	40	(11.7)
Lung	66	(19.4)
Upper gastrointestinal tract	70	(20.5)
Hepatobiliary	65	(19.1)
Pancreas	18	(5.3)
Breast	15	(4.4)
Female genital	13	(3.8)
Urinary Tract	14	(4.1)
Prostate	8	(2.3)
Bone/soft tissue	5	(1.5)
Unknown	3	(0.9)
Other	15	(4.4)
Metastatic site		
Any	223	(65.4)
Highest level of education		
Illiterate	26	(7.6)
Elementary	116	(34.0)
High school	120	(35.2)
College and beyond	75	(22.0)
Living with family, yes	316	(92.7)
Children < age 20, yes	27	(7.9)
Marital status		
Unmarried	22	(6.5)
Married	208	(61.0)
Widowed	78	(22.9)
Separated	33	(9.7)
Religion		
None	43	(12.6)
Buddhism	94	(27.6)
Christianity	24	(7.0)
Taoism	93	(27.3)
Other	87	(25.5)

212 cases (62%) chose PCU as the preferred place of death, while 19.9% preferred their own home and 15.5% of cases was undecided/unknown when they were admitted to PCU (Table 2). After a 6-months follow-up, 330 patients died, and the actual place of death were mainly in PCU (83%) while only 10.9% at home. The most reasons for patient's preference on place of death and the actual place of death eventually were also shown in Table 2.

Table 2. Preference for place of death and actual place of death

	Patient's preference N=341 (%)	Actual N=330 (%)
Place of death		
PCU/hospice	212 (62.2)	283 (83)
General ward	7 (2.1)	8 (2.3)
Own home	68 (19.9)	37 (10.9)
Care/nursing home	1 (0.3)	1 (0.3)
Home of a relative/friend	0 (0)	0 (0)
Other	16 (4.7)	1 (0.3)
Unknown	37 (10.9)	0 (0)
Top reasons for patient's decision on place of death		
Being a burden to others	100 (29.3)	75 (22)
Availability of EOL care resources	184 (54)	216 (63.3)
Convenience of verifying death	23 (6.7)	32 (9.4)
Traditional/cultural custom	63 (18.5)	41 (12)
Influence of family members' preferences	156 (45.7)	205 (60.1)
Ownership/settings of housing	25 (7.3)	29 (8.5)
Other	20 (5.9)	9 (2.6)
Unknown	39 (11.4)	12 (3.5)

EOL: end of life, PCU: palliative care unit

222 cases achieved the congruence between preferred and actual place Of death, whereas 108 cases had the incongruence (Table3).

Table 3. Congruence between preference (when admission) and actual place of death

	N=330 (%)
Congruence	222 (67)
1 st : PCU/hospice	195 (88)
2 nd : Own home	27 (12)
Incongruence	108 (33)
1 st : Own home → PCU/hospice	36 (33)
2 nd : Unknown → PCU/hospice	31 (29)
3 rd : Other → PCU/hospice	13 (12)

PCU: palliative care unit

In the multivariate analyses, expressed preference for the place of death was associated with congruence between preferred and actual place, while the influence from traditional or cultural custom around the time-point of death was associated with the incongruence. No significantly difference was found of the Good Death Scale score for those died in PCU compared with those died at home, care home, or home of a relative/friend (Table 4). Good Death Scale score for the patients who had the congruence between preferred and actual place of death is also not different from the score in cases who had the incongruence of place of death.

Table 4. Good Death Scale (GDS) score stratified by place of death

GDS score stratified by actual place of death			
	N=	GDS score mean ± SD	<i>p</i> -value
PCU/hospice	218	13.35±1.95	0.2941
Own home+ Care/nursing home	17	12.82±2.60	
+ Home of a relative/friend			
GDS score stratified by congruence between preference and actual place of death			
	n	GDS score mean ± SD	<i>p</i> -value
Congruence	169	13.38±2.03	0.6301
Incongruence	68	13.24±2.00	

PCU: palliative care unit

❖ Conclusion: The QOD of terminal-ill cancer patients did not differ from the POD and the congruence between preferred and actual POD.

❖ References:

1. Billingham MJ and Billingham SJ. Congruence between preferred and actual place of death according to the presence of malignant or non-malignant disease:a systematic review and meta-analysis. BMJ Support Palliative Care. 2013 Jun;3(2):144-54.
2. Cheng S-Y, et al. Good death study of elderly patients with terminal cancer in Taiwan. Palliative medicine.2008;22(5):626-632.