The Efficiency of Applying Short Messaging Service for Surgical Patient Families

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Research purpose

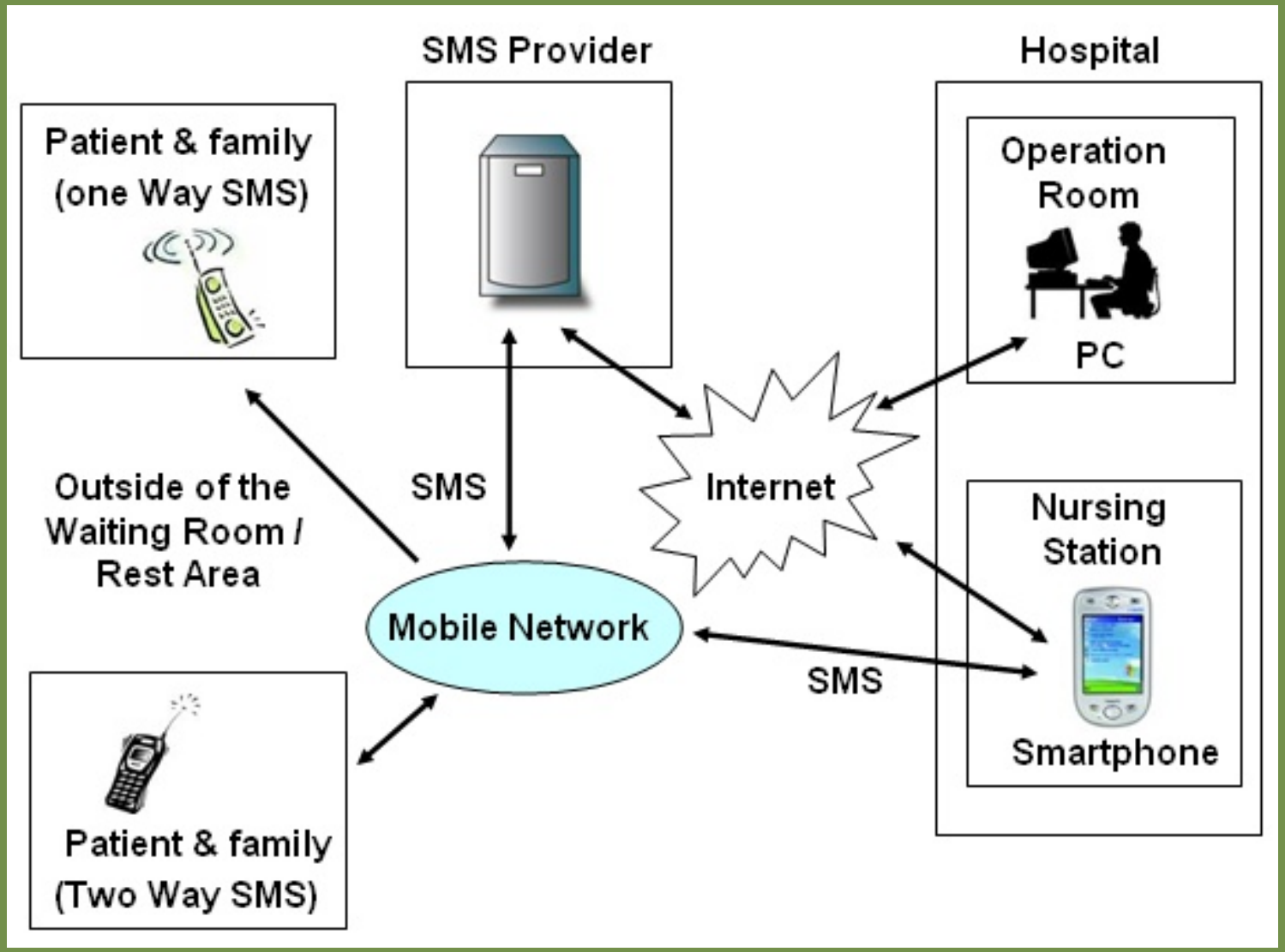
- *develop a web-based short messaging service (SMS) system in the operation room (OR).*

- *integrated and analyzed the limits of SMS in OR.*

Method and material

- *a cross-sectional study with quantitative method and convenience sampling was used to gather data in this study.*
- *both participant satisfaction and individual-opinion scale were scored up as 1 to 5 in this study (5= strong agree).*
- *anxiety scale were scored up 0-10.*

The structure for surgical patient family with a web-based SMS system



Research process

- *approached the content of SMS with operation diagnosis, patient sources and time series (pre-, intra-, and post-operation).*

Results

- *gather data between August 20 and October 19,2005.*

- *three hundred twenty-two participants received 685 text messages and 283 participants answered satisfaction questionnaires (87.89%).*

Demographic characteristics of the SMS participants

(n=283)

Variable	n	%
Source		
Outpatient	29	10.3
Inpatient	254	89.7
Patient age		
<18	12	4.3
≧18,<40	98	34.6
≧40	173	61.1
Patient gender		
Female	167	59.0
Male	116	41.0

Demographic characteristics of the SMS participants

(n=283)

Variable	n	%
Operation duration		
<1hour	52	18.4
>1hour , ≦2 hours	45	15.9
>2hours, ≦4 hours	162	57.2
>4 hours	24	8.5
Family age*		
<18	10	3.6
≧18,< 40	147	51.9
≧40	126	44.5
Family gender*		
Female	159	56.2
Male	124	43.8
Family's education status*		
Primary+ secondary	54	19.1
High school and higher	229	80.9

Patient/family satisfaction

(n=283)

Topic	mean	SD
Better time arrangement	4.3	.63
Waiting at other place	4.3	.72
Reduce waiting time	4.3	.67
Get real time information	4.5	.61
Reduce family's anxiety level	4.5	.59
Reduce family's business delay	4.4	.63
Reduce patient's anxiety for surgery	4.3	.72
Reduce patient's anxiety for family waiting	4.4	.69

96.7% reported it reduce families' waiting anxiety

Text messages of patient/family's opinion

(n=283)

Variable	mean	SD
Pre-operation identify	4.4	.58
Patient name	4.4	.59
Disease diagnosis	4.3	.65
Surgery site	4.3	.68
Surgery category	4.3	.68
Surgery time, initial/ending	4.4	.59
Intra-operation information	4.4	.58
Emergency information	4.4	.66
Surgery status information	4.6	.55
Surgery finish information	4.6	.52
Post-operation follow up	4.4	.53
Clinic information	4.6	.55
Education information	4.3	.63
Medication reminder	4.5	.53

Discussion

- *this study captured self-reported anxiety, autonomy, and SMS demands.*
- *the automated paging system provided the advantage of personalized messages.*
- *the SMS system function is more convenience and excellent than before.*

Conclusion

- *The findings show the usability of SMS that applied to the clinical care, especially for reducing family anxiety, real time information, physician-patient communication, medical care processes and patient's safety.*