
HSD27

# A 2013-2019 Comparative Study of Patient Safety Culture at 16 Hospitals in Shimane, Japan

Endo S[1], Hirose M[2]

[1]Shimane University Hospital, Izumo, Japan, [2]Kobe University Graduate School of Medicine, Kobe, Japan

***Objective:*** **This study aims to examine the difference of patient safety culture between 2013 and 2019 at 16 hospitals in a rural prefecture of Japan.**

***Methods:*** **Questionnaire surveys were conducted at 16 hospitals (average number of beds:238 (50 to 600); average number of staff:377 (49 to 1,700) in 2013 and 2019 with using a Hospital Survey on Patient Safety Culture (HSOPSC) sheet developed by the United States Agency for Healthcare Research and Quality (AHRQ). It consists of 12 factors (42 items) based on four categories: Communication, Organizational activity and understanding, Education/learning and Number of reports.**

***Results:***

**■The numbers of valid respondents were 2977 (doctors: 215, nurses: 1638, clinical staff: 493,office workers: 364) in 2013 and 3451 (doctors: 235, nurses: 1797, clinical staff: 618, office workers:492) in 2019, respectively (Table 1)**

**■The average positive response rates (PRRs) of 12 dimensions in 2019 was53.1 and increased by 0.3%, compared with that in 2013. (Table 2)**

**■Out of 12 dimensions, PRRs of 8 dimensions increased and three of them including D1: Communication openness, D8: Overall of perceptions for patient safety, and D10: Supervisor/manager expectations and actions promoting safety extremely changed. On the contrary, D3: Frequency of events reported, D4: Hands-off and transitions, and D12: Teamwork within units declined. (Table 3)**

**■The 12-dimension average PRR by occupation increased by 4.3% and PRRs for physicians and clinical staff increased by 2.4%, respectively. The PRRs for nurses and clerical staff were unchanged.(Table 4)**

## Table 1. Number and percentage of staff

| profession | 2013 | | 2019 | |
|---|---|---|---|---|
| | number | % | number | % |
| doctor | 215 | 7.2% | 235 | 6.8% |
| nurse | 1,638 | 55.0% | 1,797 | 52.1% |
| clinical staff | 493 | 16.6% | 618 | 17.9% |
| office worker | 364 | 12.2% | 492 | 14.3% |
| other | 267 | 9.0% | 309 | 9.0% |
| total | 2,977 | 100.0% | 3,451 | 100.0% |

## Table 2. Composite-level Average PRRs btw 2013 & 2019

| Patient Safety Culture Composite | PRR% (2013) | PRR% (2019) | difference % |
|---|---|---|---|
| f1:Communication openness | 44.6 | 46.0 | 1.4 |
| f2:Feedback & communication about error | 62.5 | 62.5 | 0.0 |
| f3:Frequency of events reported | 66.2 | 64.9 | -1.3 |
| f4:Handsoff & transitions | 42.2 | 41.8 | -0.5 |
| f5:Management support for patient safety | 47.6 | 47.9 | 0.3 |
| f6:Nonpunitive response to error | 49.8 | 50.7 | 1.0 |
| f7:Organizational learning-continuous improvement | 54.4 | 54.5 | 0.1 |
| f8:Overall of perceptions for patient safety | 46.2 | 47.9 | 1.7 |
| f9:Staffing | 30.1 | 30.5 | 0.4 |
| f10:Supervisor/manager expectations & actions promoting safety | 71.1 | 72.8 | 1.8 |
| f11:Teamwork across units | 44.8 | 45.4 | 0.5 |
| f12:Teamwork within units | 74.1 | 72.5 | -1.6 |
| average | 52.8 | 53.1 | 0.3 |

## Table 3. Dimensions increased & contrary Composite-level Average PRRs btw 2013 & 2019

| Patient Safety Culture Composite | PRR% (2013) | PRR% (2019) | difference % |
|---|---|---|---|
| f1:Communication openness | 44.6 | 46.0 | 1.4 |
| f2:Feedback & communication about error | 62.5 | 62.5 | 0.0 |
| f3:Frequency of events reported | 66.2 | 64.9 | -1.3 |
| f4:Handsoff & transitions | 42.2 | 41.8 | -0.5 |
| f5:Management support for patient safety | 47.6 | 47.9 | 0.3 |
| f6:Nonpunitive response to error | 49.8 | 50.7 | 1.0 |
| f7:Organizational learning-continuous improvement | 54.4 | 54.5 | 0.1 |
| f8:Overall of perceptions for patient safety | 46.2 | 47.9 | 1.7 |
| f9:Staffing | 30.1 | 30.5 | 0.4 |
| f10:Supervisor/manager expectations & actions promoting safety | 71.1 | 72.8 | 1.8 |
| f11:Teamwork across units | 44.8 | 45.4 | 0.5 |
| f12:Teamwork within units | 74.1 | 72.5 | -1.6 |
| average | 52.8 | 53.1 | 0.3 |

## Table 4. Composite-level Average PRRs by profession btw 2013 & 2019

| Patient Safety Culture Composite | doctor | | | nurse | | | clinical staff | | | office worker | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PRR% (2013 | PRR% (2019 | difference% | PRR% (2013 | PRR% (2019 | difference% | PRR% (2013 | PRR% (2019 | difference% | PRR% (2013 | PRR% (2019 | difference% |
| f1:Communication openness | 53.4 | 55.7 | 2.2 | 44.7 | 46.6 | 1.8 | 42.5 | 44.5 | 2.0 | 44.6 | 45.7 | 1.1 |
| f2:Feedback & communication about error | 52.8 | 57.7 | 4.9 | 67.9 | 67.8 | -0.1 | 56.7 | 61.2 | 4.5 | 53.1 | 50.3 | -2.8 |
| f3:Frequency of events reported | 53.2 | 51.9 | -1.3 | 70.8 | 69.2 | -1.6 | 58.7 | 60.0 | 1.3 | 62.3 | 58.5 | -3.8 |
| f4:Handsoff & transitions | 37.8 | 40.9 | 3.1 | 44.3 | 43.5 | -0.9 | 35.8 | 37.4 | 1.5 | 40.6 | 42.3 | 1.7 |
| f5:Management support for patient safety | 43.6 | 50.5 | 6.9 | 47.7 | 46.5 | -1.2 | 43.4 | 46.0 | 2.6 | 52.0 | 53.7 | 1.7 |
| f6:Nonpunitive response to error | 49.9 | 54.8 | 4.9 | 48.6 | 49.9 | 1.3 | 56.7 | 55.5 | -1.2 | 49.4 | 50.2 | 0.9 |
| f7:Organizational learning-continuous improvement | 50.6 | 55.7 | 5.2 | 58.1 | 57.9 | -0.2 | 48.2 | 52.7 | 4.5 | 46.0 | 44.6 | -1.4 |
| f8:Overall of perceptions for patient safety | 41.9 | 46.7 | 4.8 | 44.9 | 45.9 | 1.0 | 46.5 | 50.8 | 4.3 | 52.4 | 52.2 | -0.3 |
| f9:Staffing | 27.0 | 33.8 | 6.9 | 27.6 | 25.7 | -1.9 | 37.3 | 40.2 | 2.9 | 33.1 | 35.7 | 2.6 |
| f10:Supervisor/manager expectations & actions promoting | 69.3 | 72.2 | 2.9 | 73.2 | 75.4 | 2.2 | 67.2 | 71.8 | 4.6 | 66.9 | 68.6 | 1.8 |
| f11:Teamwork across units | 49.8 | 57.2 | 7.4 | 45.3 | 44.9 | -0.4 | 41.5 | 43.6 | 2.1 | 45.2 | 47.7 | 2.5 |
| f12:Teamwork within units | 73.4 | 77.1 | 3.6 | 77.5 | 75.3 | -2.3 | 68.8 | 68.2 | -0.6 | 70.6 | 68.1 | -2.5 |
| average | 50.2 | 54.5 | 4.3 | 54.2 | 54.0 | -0.2 | 50.3 | 52.7 | 2.4 | 51.4 | 51.5 | 0.1 |

***Conclusions:*** **Compared PRRs between 2013 and 2019, the average PRRs of dimensions related to 'Organization' increased, meanwhile the PRRs of dimensions related to 'Communication' decreased. Improving the working environment is therefore likely to create patient safety culture.**

If you have any questions, please contact us by email. Email address: s-endoh@med.shimane-u.ac.jp Shinichi Endo, Pharmacist, Patient Safety Manager, Medical Safety Division, Shimane University Hospital Phone: +81 853 88 3036; Fax: +81 853 88 3037.