

# *Taiwan Hospital Patient Safety Culture Survey*

**Chiu-Chin Huang, PhD**

**Minghsin University of  
Science and Technology**



# *Agenda*

- Overview of Health Care System in Taiwan
- Results of Hospital Patient Safety Culture Survey (PSC) in Taiwan
- A Comparison between Taiwan and US Hospital Patient Safety Culture



# *Country Profile (2004)*

- Population: 23 million
- Land Area: 36,188 km<sup>2</sup> (14,000 mile<sup>2</sup>)
- Population Density: 616 per km<sup>2</sup>
- Population aged over 65 : 9.6%
- GNP Per Capita : US \$14,032
- Total Health Expenditures: 6.04% of GDP



# *Health Indices*

- Crude Birth Rate: 13.76 0/00
- Crude Death Rate: 5.68 0/00
- Natural Increase Rate: 8.08 0/00
- Infant Mortality Rate: 6.4 0/00
- Maternal Mortality Rate: 7.86 0/00000
- Life Expectancy: 74.49 Male  
80.28 Female

# *Overview of Health Care System in Taiwan*

- 1995 National Health Insurance
- Health insurance coverage rate before 1995 was 59%
- A Closed System
- Free Choice of Physicians and Hospitals
- Hospital as a Multi-Product Firm

# *Characteristics of NHI (1)*

- Mandatory enrollment
- Single-payer payment system
- Operated by government agency
- Payroll-related premium rate
- Contribution shared by the employer, the employee and the government
- Public Contract Model
  - 94% hospitals, 90% clinics

# *Characteristics of NHI (2)*

- Comprehensive benefit package
- Fee-for-service and case payment under the global budget payment scheme
- Co-payment for outpatient care, inpatient care, and drugs
- Government-run insurer (BNHI)

# ***Patient Safety in Taiwan***

- 2003 “Patient Safety Committee” -- established DoH and Hospitals
- TJCHA – executive Organization
- Setting up National Reporting System
- Goals and Objectives – correspondent with those of JCAHO



# ***Hospital Patient Safety Culture Survey in Taiwan***

- **3 AHRQ Hospital PSC and 1 Safety Attitudes Questionnaire (SAQ)**
- **Grand from National Health Research Institutes**
- **Stratified Sampling**
  - **11 types of hospital ownership – 566 hospitals as parameter – 10% as samples**
- **Substitute Samples**
- **Sample size: 61 hospitals and 8,215 Respondents (valid)**

# *Method - Instrument*

- Forward & Backward Translation
- Expert Panel
- Pretest
- Cronbach's  $\alpha$  between 0.67 – 0.90



# *Method - Analysis*

- Positive Response on the hospital level -- reporting the average across hospitals
  - “culture is considered a group or hospital characteristic and is not considered to be a solely individual characteristic”
- Descriptive and Bivariate Analysis



# Sample Hospital Properties

	NO.	%
General Private Hospital	37	60.7
Non-Profit Proprietary Hospital	6	9.8
DoH-Affiliated Public Hospital	4	6.6
Private Chinese Medicine Hospital	3	4.9
Military Hospital	2	3.3
Hospital-Affiliated with Private Medical Schools	2	3.3
Municipal Hospital	2	3.3
Hospital Affiliated with Religious Organizations	2	3.3
Veteran Hospital	2	3.3
County Hospital	1	1.6

# *Sample Hospital Properties*

	<b>No.</b>	<b>%</b>
<b>below 100 beds</b>	<b>18</b>	<b>29.5</b>
<b>101-249 beds</b>	<b>14</b>	<b>23.0</b>
<b>250-499 beds</b>	<b>13</b>	<b>21.3</b>
<b>More than 500 beds</b>	<b>16</b>	<b>26.2</b>

# *Sample Hospital Properties*

	No.	%
<b>Northern Taiwan</b>	<b>24</b>	<b>39.3</b>
<b>Central Taiwan</b>	<b>19</b>	<b>31.1</b>
<b>Southern Taiwan</b>	<b>14</b>	<b>23.0</b>
<b>Eastern Taiwan</b>	<b>4</b>	<b>6.6</b>
<b>Public</b>	<b>11</b>	<b>18.0</b>
<b>Private</b>	<b>50</b>	<b>82.0</b>
<b>Non-teaching</b>	<b>29</b>	<b>47.5</b>
<b>Teaching</b>	<b>32</b>	<b>52.5</b>

# *Characteristics of Respondents*

	No.	%
Medicine	1504	18.3
Surgery	867	10.6
Administration	813	9.9
ICU (any type)	784	9.5
Emergency	564	6.9
Outpatient Clinic	511	6.2

# *Characteristics of Respondents*

- 57.7% Nursing Staff
- 10.1% Administrative Staff
- 9.8% Medical Staff (include Attending Physicians, Physician Assistants and Nurse Practitioners )
- 86.6% Female

# Composite-Level Highest Positive Response

	TWN	USA
Teamwork Within Units	81%	79%
Organizational Learning Continuous Improvement	81%	70%
Supervisor/Manager Expectations & Actions Promoting Patient Safety	70%	75%

# *Composite-Level Lowest Positive Response*

	TWN	USA
Nonpunitive Response to Error	31%	44%
Frequency of Events Reported	31%	60%
Handoffs & Transitions	43%	45%

# Composite-Level with Difference

- Frequency of Events Reported (31% vs. 60%)
- Communication Openness (40% vs. 62%)
- Feedback and Communication About Error (44% vs. 62%)



# *Item-Level Highest PR*

	TWN	USA
People support one another in this unit.	89%	84%
When a lot of work needs to be done quickly, we work together as a team to get the work done.	82%	85%
We are actively doing things to improve patient safety.	84%	81%

# Item-Level Lowest PR

	TWN	USA
Staff worry that mistakes they make are kept in their personnel file. (R)	20%	36%
We have patient safety problems in this unit. (R)	24%	62%
We are given feedback about changes put into place based on event reports.	27%	52%
Things “fall between the cracks” when transferring patients from one unit to another. (R)	46%	41%

# Item-Level with Sig Difference

	TWN	USA
Mistakes have led to positive changes here.	82%	62%
Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts. (R)	56%	74%
We have patient safety problems in this unit. (R)	24%	62%
We are given feedback about changes put into place based on event reports.	27%	52%
We are informed about errors that happen in this unit.	37%	64%

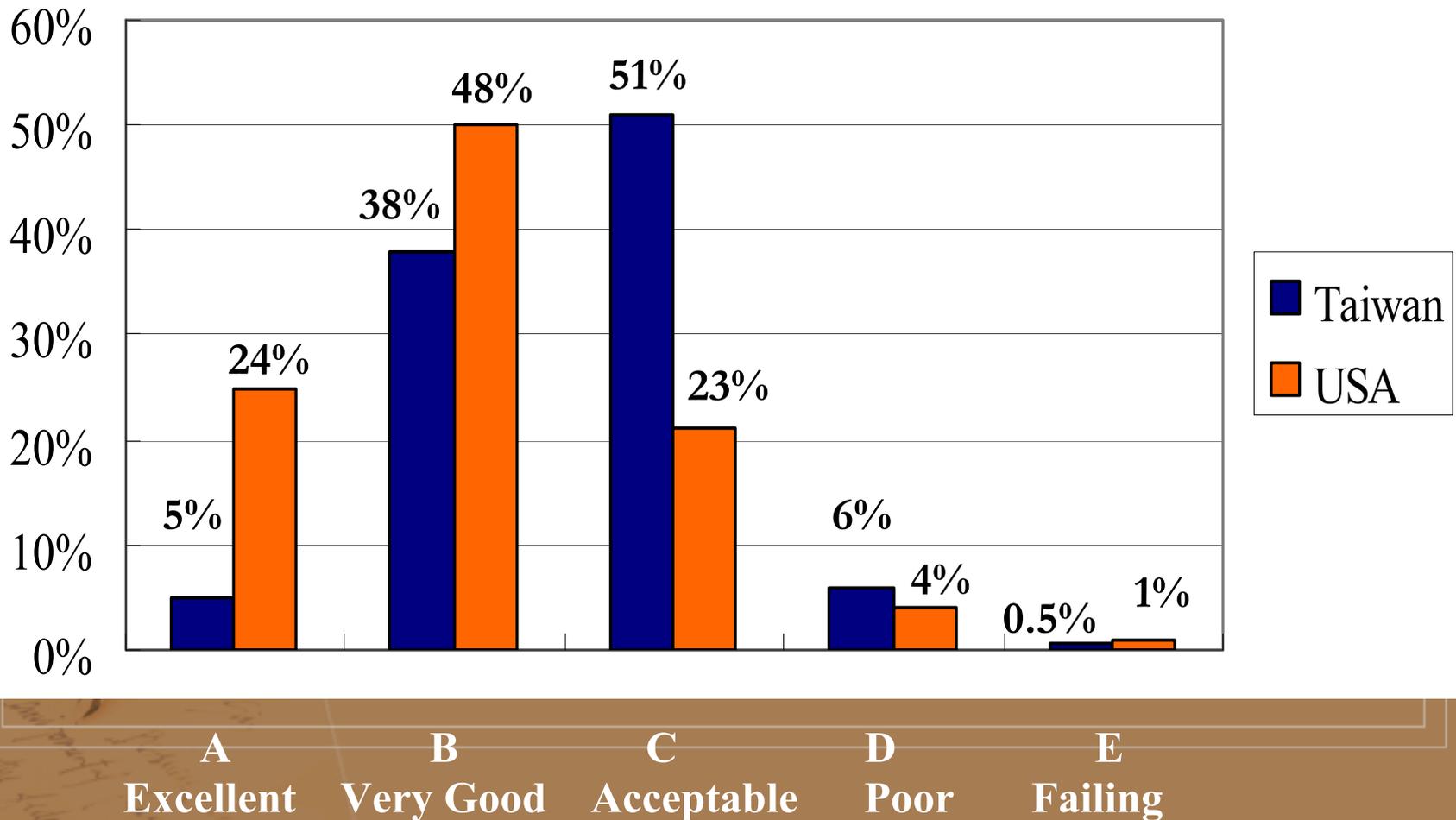
# Item-Level with Sig Difference

	TWN	USA
Shift changes are problematic for patients in this hospital. (R)	28%	46%
Staff will freely speak up if they see something that may negatively affect patient care.	46%	76%
Staff are afraid to ask questions when something does not seem right . (R)	37%	63%
Staff feel like their mistakes are held against them. (R)	24%	51%

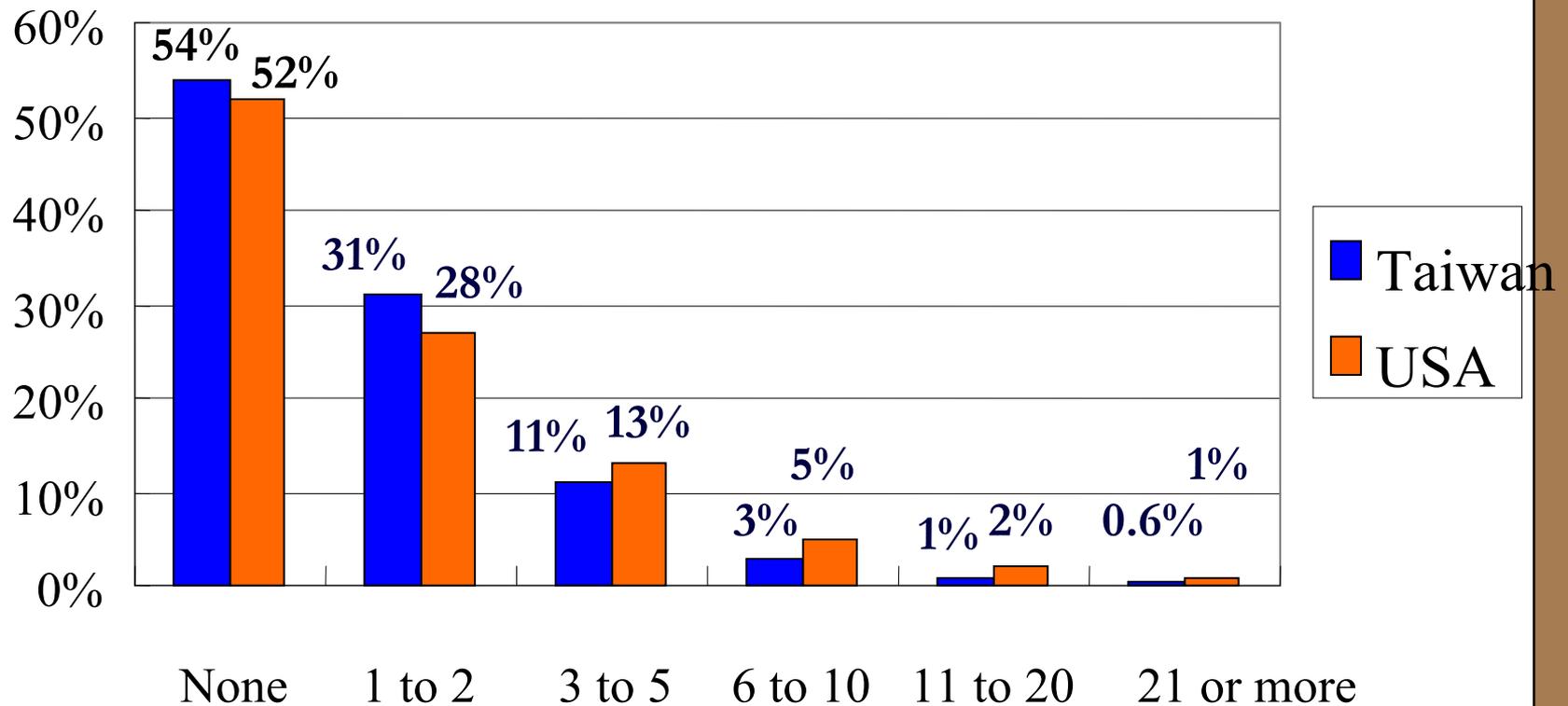
# *Item-Level with Sig Difference*

	TWN	USA
When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?	<b>33%</b>	<b>51%</b>
When a mistake is made, but has no potential to harm the patient, how often is this reported?	<b>26%</b>	<b>55%</b>
When a mistake is made that could harm the patient, but does not, how often is this reported?	<b>34%</b>	<b>73%</b>

# Unit Grade on Patient Safety



# Frequent of Events Reported



# *Public vs. Private Hospitals Taiwan vs. US*

- Taiwan: Public H is slightly higher in Frequency of Events Reported; Private H is higher percent of positive responses in other 11 composite-level than Public H
  - Teamwork Within Units (6% more positive)
  - Teamwork Across Units (10% more positive)
  - Staffing (11% more positive)
  - Communication Openness (6% more positive)
  - Nonpunitive Response to Error (5% more positive)

# *Public vs. Private Hospitals Taiwan vs. US*

- US: Public H had higher percent of positive responses than Private H
  - *Handoffs & Transitions* (7% more positive)
  - *Staffing* (5% more positive)
  - *Teamwork Across Units* (5% more positive)



# *Public vs. Private Hospitals Taiwan vs. US*

- Differences on patient safety grade based on ownership and control
  - TWN: Public H had higher percent on Grade of Acceptable than that on Private H
  - US: There were no noticeable (all differences were 2 percent or less)
- Taiwan vs. US: There were no noticeable differences on number of events reported based on ownership and control (all differences were 1 percent or less)

# Conclusion

- 61 Hospitals with 8,215 Respondents
- Two Advantages -- Teamwork within Units & Organizational Learning Continuous Improvement
  - Consistent with Yu's finding
- Potential for improvement -- Nonpunitive Response to Error & Frequency of Events Reported
  - Consistent with Shi's & Kuo's finding
- Unit PS Grade -- Less than 50% grading Positive
- More than 50% never reporting events
- Private H are more positive than Public H

# *Comparison with US*

- Stronger culture -- Org Learning
- 10 composites are all lower, especially Events Reported
- Lower positive grade and more in acceptable
- Similar results on frequency of events reported
- Private Hospital had higher percent of positive responses than Public H

***Thank You for Your Attention***

