Patient and healthcare provider safety in Thai healthcare context:
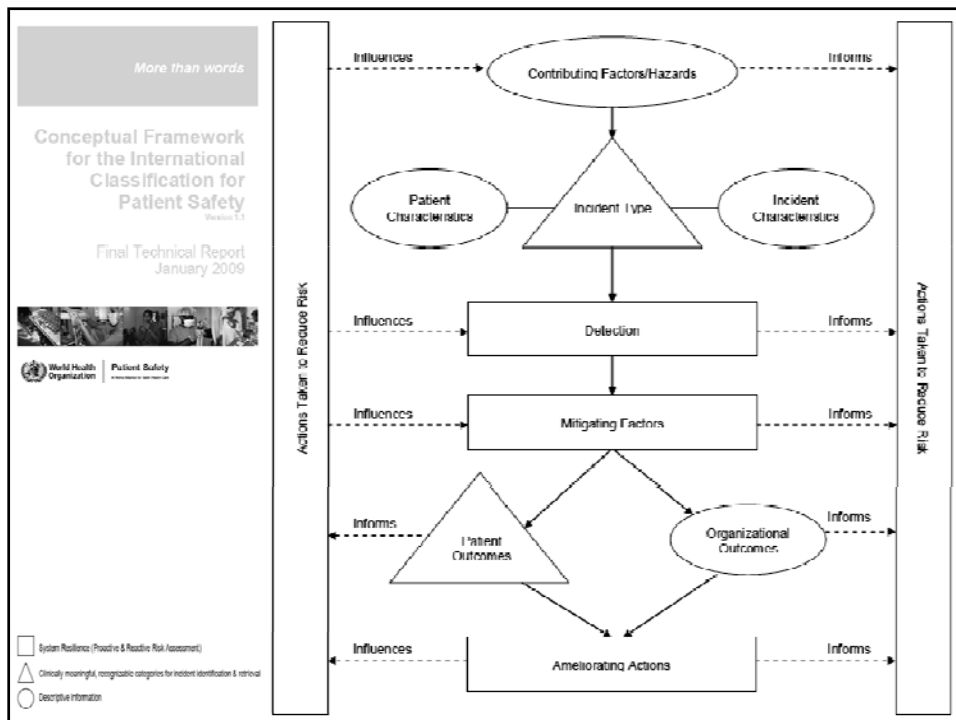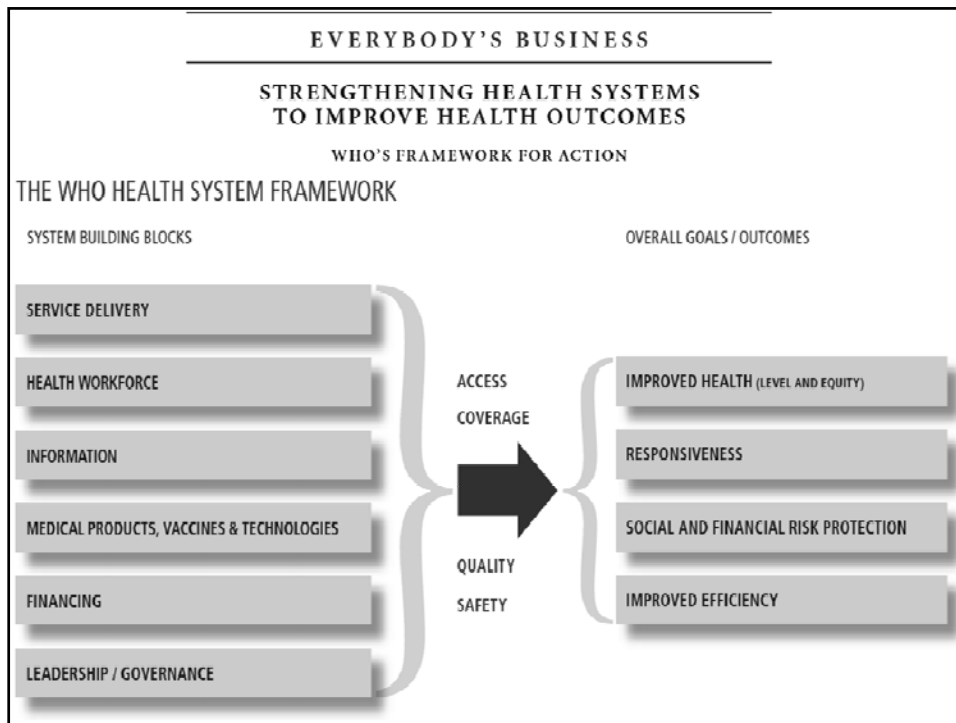
Challenges and future directions

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Key issues

- Some international movement

- Some findings from research studies in Thailand

- The Future

EVERYBODY'S BUSINESS

STRENGTHENING HEALTH SYSTEMS TO IMPROVE HEALTH OUTCOMES

WHO'S FRAMEWORK FOR ACTION

THE WHO HEALTH SYSTEM FRAMEWORK

SYSTEM BUILDING BLOCKS

OVERALL GOALS / OUTCOMES

SERVICE DELIVERY

HEALTH WORKFORCE

INFORMATION

MEDICAL PRODUCTS, VACCINES & TECHNOLOGIES

FINANCING

LEADERSHIP / GOVERNANCE

ACCESS

COVERAGE

QUALITY

SAFETY

IMPROVED HEALTH (LEVEL AND EQUITY)

RESPONSIVENESS

SOCIAL AND FINANCIAL RISK PROTECTION

IMPROVED EFFICIENCY

More than words

Conceptual Framework for the International Classification for Patient Safety
Version 1.1

Final Technical Report
January 2009

World Health Organization | Patient Safety

☐ System Resilience (Proactive & Reactive Risk Assessment)

△ Clinically meaningful, recognizable categories for incident identification & retrieval

◯ Descriptive information

Actions Taken to Reduce Risk

Actions Taken to Reduce Risk

Influences — Contributing Factors/Hazards — Informs

Patient Characteristics — Incident Type — Incident Characteristics

Influences — Detection — Informs

Influences — Mitigating Factors — Informs

Informs — Patient Outcomes / Organizational Outcomes — Informs

Influences — Ameliorating Actions — Informs

WHO Patient Safety Research (2009)

	Developing countries	Countries in transition	Developed countries
	Strong emphasis on applied and evaluative research leading to the development of local cost-effective solutions		
1.	Counterfeit & substandard drugs	Inadequate competencies & skills	Lack of communication & coordination (including coordination across organizations, discontinuity & handovers)
2.	Inadequate competencies & skills	Lack of appropriate knowledge & transfer	Latent organizational failures
3.	Maternal & newborn care	Lack of communication & coordination (including coordination across organizations, discontinuity & handovers)	Poor safety culture & blame-oriented processes
4.	Health care associated infections	Health care associated infections	Inadequate safety indicators
5.	Unsafe injection practices	Maternal and newborn care	Adverse drug events due to drugs & medication errors
6.	Unsafe blood practices	Adverse events due to drugs & medication errors	Care of the frail & elderly

Patient Safety Research Competencies

1. The fundamental concepts of the science of patient safety in their specific social, cultural and economic context.

1.1 Basic definitions and foundational concepts, including human factors and organizational theory

1.2 The burden of unsafe care

1.3 The importance of a culture of safety

1.4 The importance of effective communication and collaboration in care delivery teams

1.5 The use of evidence-based strategies for improving the quality and safety of care

1.6 The identification and management of hazards and risks

1.7 The importance of creating environments for safe care

1.8 The importance of educating and empowering patients to be partners for safer care

You can't manage if you can't measure.

Measurement Strategy

MATERNITY AND CHILDREN

Scottish Patient Safety Programme
Maternity Care
Measurement Package

Patient safety research in Thailand

- A lot of information from quality improvement projects, but limited findings from systematic research.

- Little evidence on safe practices and their outcomes.

- Share a lot, but evidence of LEARNING and IMPROVEMENT ???

Occurrence of adverse events in Thailand

Asia Biomedicine Vol.3 No.3 october 2009, 545-550
Brief communication (Original)

Identifying adverse events in hospitalized patients using global trigger tool in Thailand

Santawat Asavaroengchai, Broth Sriratanaban, Narin Hiransuthikul, Anuwat Supachutikul
Department of Preventive and Social Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok 10330, The Institute of Hospital Quality Improvement and Accreditation (HA-Thailand), Nonthaburi 11000, Thailand

Subgroup	Number of cases	Percent
Male	221	38.4
Female	355	61.6
<1	108	18.8
1–14	46	8.0
15–29	89	15.5
30–44	107	18.6
45–59	89	15.5
≥60	137	23.8
Acute	326	56.6
Appointment	250	43.4
Obstetric Gynecology	140	24.3
Surgery	154	26.7
Medicine	113	19.6
Pediatrics	148	25.7
Orthopedics	21	3.6
Mean (95%CI)	7.7 (6.5–9.0)	
Median (Q1-Q4)	4.0 (2.0–7.0)	

576 sampled medical records

↓

776 positive triggers (1.35 triggers/patient)

↓

138 medical records with adverse events (24.0%) (95%CI: 20.5-27.5%)

↓

236 adverse events found

41.0 events/100 patients (95%CI: 32.3-49.6 events/100 patients) | 50.4 events/1,000 patient-days (95%CI: 40.7-60.0 events/1000 patients)

(E) 125 events (53.0%) | (F) 102 events (43.2%) | (G) 6 events (2.5%) | (H) 1 event (0.4%) | (I) 2 events (0.8%)

(Level 1) 24 events (10.2%) | (Level 2) 81 events (34.3%) | (Level 3) 122 events (51.7%) | (Level 4) 13 events (5.9 %)
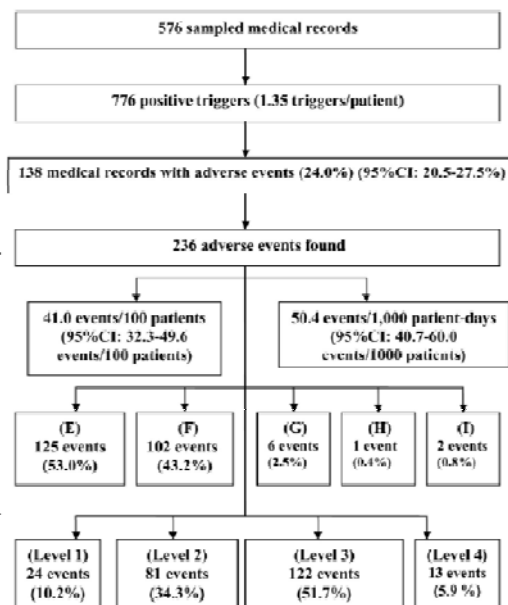
Fig. 1 Number of result in each process of review. E, F, G, H, and I indicate severity-rating

	Patient Safety Goals (SIMPLE)	Amount	Percent
S	Safe surgery	48	20.3
S1	Surgical site infection (SSI) prevention	5	2.1
S2	Safe anesthesia	7	3.0
S3	Safe surgical team	9	3.8
S3.1	Correct procedure at correct body site	4	1.7
S3.2	Surgical safety checklist	23	9.7
I	Infection control	40	16.9
I1	Hand hygiene/clean hand	8	3.4
I2	Prevention of healthcare associated infection	14	5.9
I2.1	Catheter-associated urinary tract infection (CAUTI) prevention	8	3.4
I2.2	Ventilator-associated pneumonia (VAP) prevention	6	2.5
I2.3	Central line infection prevention	4	1.7
M	Medication and blood safety	42	17.8
M1	Safe from adverse drug events (ADE)	31	13.1
M1.1	Control of concentrated electrolyte solutions	0	0
M1.2	Improve the safety of high-alert drug	4	1.7
M2	Safe from medication error	1	0.4
M2.1	Look alike sound alike medication names	0	0
M3	Medication reconciliation/assuring medication accuracy at transition in care	0	0
M4	Blood safety	6	2.5
P	Patient care processes	75	31.8
P1	Patients identification	0	0
P2	Communication	0	0
P2.1	Effective communication	0	0
P2.2	Communication during patient care handovers	0	0
P2.3	Communicating critical test results	0	0
P2.4	Verbal or telephone order/communication	0	0
P2.5	Abbreviations, acronyms, symbols and dose designation	0	0
P3	Proper diagnosis	14	5.9
P4	Preventing common complications	53	22.5
P4.1	Preventing pressure ulcers	5	2.1
P4.2	Preventing patient falls	3	1.3
L	Line, tube and catheter	4	1.6
L1	Avoiding catheter and tubing misconnections	4	1.6
E	Emergency response	27	11.4
E1	Response to the deteriorating patient/ Rapid response team (RRT)	3	1.3
E2	Sepsis	0	0
E3	Acute coronary syndrome	2	8.0
E4	Maternal and neonatal morbidity	22	9.3

Self efficacy and adverse events

Table 2 Occurrences of adverse events and occurrences of adverse events plus near misses recorded at the end of Months 3, 6, 9 and 12

	Months 1–3 (n = 310)	Months 4–6 (n = 308)	Months 7–9 (n = 306)	Months 10–12 (n = 299)	Overall incident rate (per 100 man-month)
Adverse events					
Low self-efficacy group (total = 157)	11 (n = 157)	8 (n = 155)	11 (n = 153)	9 (n = 149)	2.12
High self-efficacy group (total = 153)	1 (n = 153)	2 (n = 153)	3 (n = 153)	2 (n = 150)	0.44
Period-by-period unadjusted RR	10.7 [1.5–461.4]	3.9 [0.7–37.9]	3.6 [0.9–20.2]	4.4 [0.9–42.4]	P < 0.001*
Adverse events plus near misses					
Low self-efficacy group (total = 157)	73 (n = 157)	58 (n = 155)	68 (n = 153)	61 (n = 149)	14.11
High self-efficacy group (total = 153)	30 (n = 153)	34 (n = 153)	41 (n = 153)	43 (n = 150)	8.10
Period-by-period unadjusted RR	2.4 [1.5–3.7]	1.7 [1.1–2.6]	1.6 [1.1–2.5]	1.4 [0.9–2.1]	P < 0.001*

*Statistically significant difference in the overall incidence rates between the low- and high self-efficacy groups.

Table 5 Adjusted relative risk of risks of AEs of the LOW self-efficacy group relative to the HIGH self-efficacy group, controlled for significant confounders from bivariate analyses, estimated by Poisson regression using GEE

	Adjusted RR	95% confidence interval	P-value
Self-efficacy: 'low' relative to 'high'	4.7	2.1–10.2	<0.001
Age: '60+' relative to '<60' years old	2.2	0.9–5.1	0.051
SMBG: 'no' relative to '1–3 times per day'	0.8	0.4–1.5	0.60
Use of long-acting insulin: 'Yes' relative to 'No'	3.1	1.7–10.9	0.008
Body mass index: '25+' relative to '< 25'	1.4	0.7–2.7	0.28
Dose insulin: '>50 unit' relative to '<50 unit'	1.2	0.6–2.1	0.51
Status: 'single/window 'relative to 'married'	0.7	0.3–1.4	0.35

Note: total number of subjects = 310 (1223 observations).

Self-efficacy in diabetic care and occurrence of adverse events in an ambulatory setting

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Findings from HA Evaluation Study (2013-14)

- Hospital experience :
  - Improvements could be identified in areas, such as :
    - ❖ *Risk management system*
    - ❖ *Prevention and control of hospital acquired infection*
    - ❖ *Medication safety*
    - ❖ *Environmental safety (Physical)*
  - Effective and context-sensitive measures for monitoring patient safety in hospitals are needed
  - Patient safety culture needs continuous strengthening

Surveyors' comments: Opportunities for improvements

หัวข้อมาตรฐาน	จำนวนความเห็นของผู้เยี่ยมสำรวจ							
	ประเด็นชื่นชม				ประเด็นโอกาสพัฒนา			
(N: ปี'52=14; ปี'53=33; ปี'54=41; ปี'55=72)	52	53	54	55	52	53	54	55
3. สิ่งแวดล้อมในการดูแลผู้ป่วย (ENV)	7	23	33	61	23	67	20	12
3.1 สิ่งแวดล้อมทางกายภาพและความปลอดภัย (ENV.1)	3	7	12	38	5	24	43	102
3.2 เครื่องมือ/ระบบสาธารณูปโภค(ENV.2)	2	6	9	13	13	22	32	87
3.3 สิ่งแวดล้อมเพื่อการสร้างเสริมสุขภาพและการพิทักษ์สิ่งแวดล้อม (ENV.3)	-	3	4	17	4	22	32	90
4. การป้องกันและควบคุมการติดเชื้อ (IC)	7	14	24	42	24	63	43	76
4.1 การป้องกันและควบคุมการติดเชื้อ (IC)	-	-	2	10	1	-	7	33
4.2 ปฏิบัติการป้องกันการติดเชื้อ (IC.2)	-	-	-	14	2	-	1	36
4.3 การเฝ้าระวัง ติดตามกำกับ และควบคุมการระบาด (IC.3)	-	-	4	3	1	3	14	37
6. ระบบการจัดการด้านยา (MMS)	8	17	33	55	26	75	86	157
6.1 การวางแผน การจัดการ การเก็บและสำรองยา (MMS.1)	-	-	-	6	5	-	7	31
6.2 การใช้ยา (MMS.2)	-	-	-	9	1	2	11	60

Some relevant challenges in the Thai health system

- Aging society and chronic diseases
- Resource limitation and practice variation
- Variety of healthcare providers by ownership, type, levels of competency
- Need for effective and safe facility design and infrastructure
- Work system and job redesign
- Reliance on referral systems
- Patient safety in daily operations
- Consumer empowerment, and patient roles in patient safety
- Legal issues

The Future …

- Encourage "Management by fact"
- Promote innovation: Work system, Work process, Job design
- Integrate safety culture and work culture
- Apply information technology for patient safety
  – Electronic medical (health) record system
- Rethink hospital and facility design
- Customize patient safety solutions:
  "What to do" + "How to make change"
- Engage patients: Health literacy