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Patient Safety in Ageing Society Specific Risk in Elderly People

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on behalf of

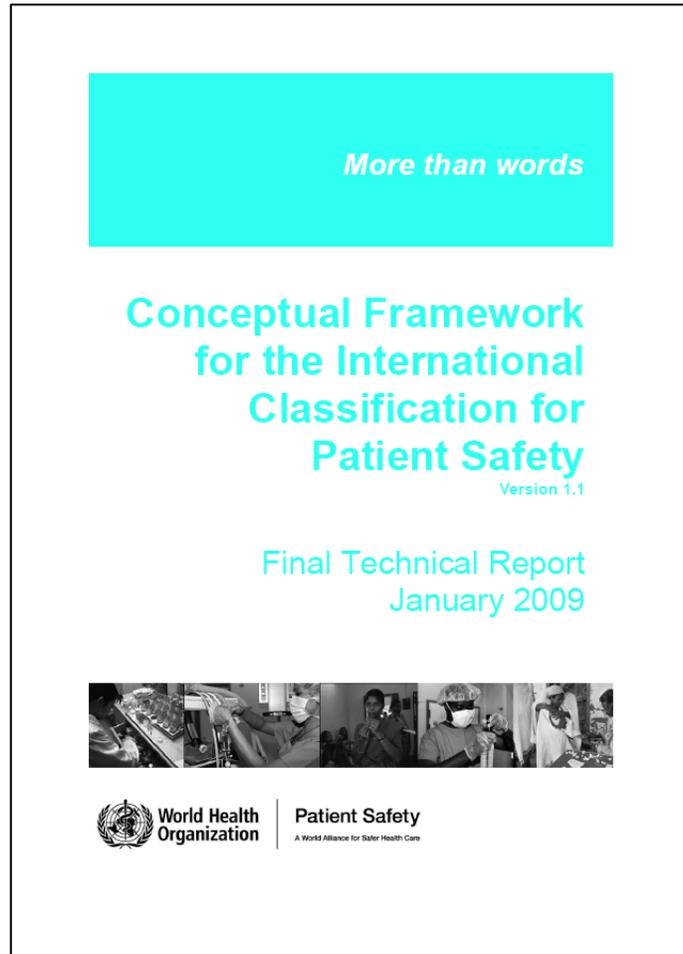
Jockey Club School of Public Health and Primary Care & Jockey Club Institute of Ageing
The Chinese University of Hong Kong, HKSAR
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New Territories East Cluster, Hospital Authority, HKSAR

Context

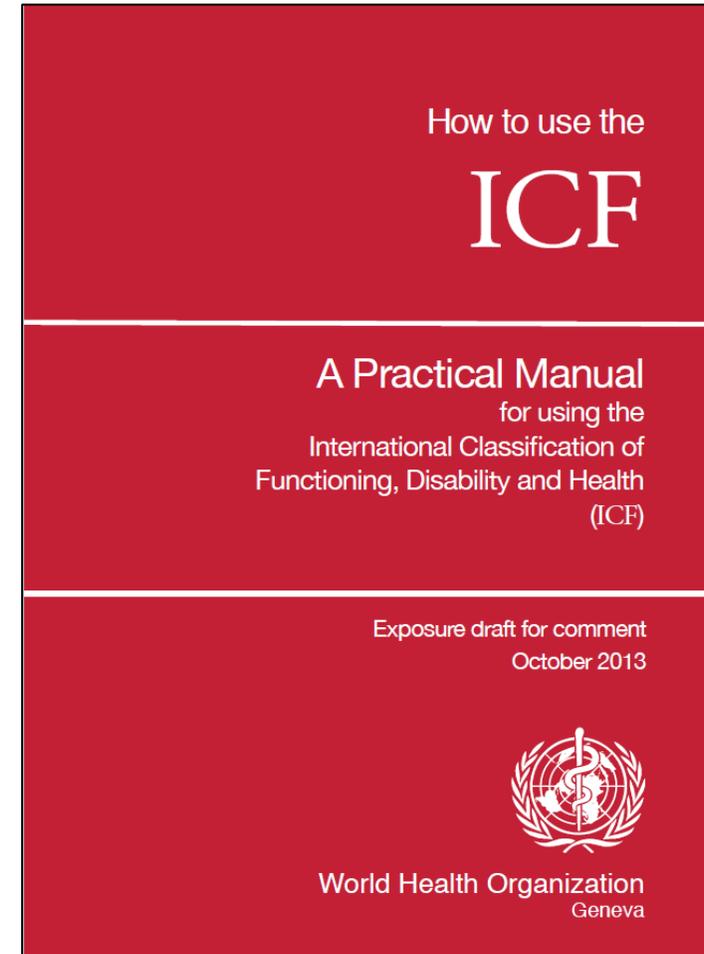
- Elderly patients/people are at high “Patient Safety” Risk as a patient/ person.
- The risks are different for each individual and for different settings (healthcare/home).
- Would be useful to have a systematic and integrated framework to assess Patient Safety Risk in elderly, making use of 2 existing WHO frameworks:
 - **International Classification for Patient Safety**
 - **International Classification of Functioning, Disability and Health**

2 WHO frameworks - ICPS & ICF

International Classification for Patient Safety



International Classification of Functioning, Disability and Health

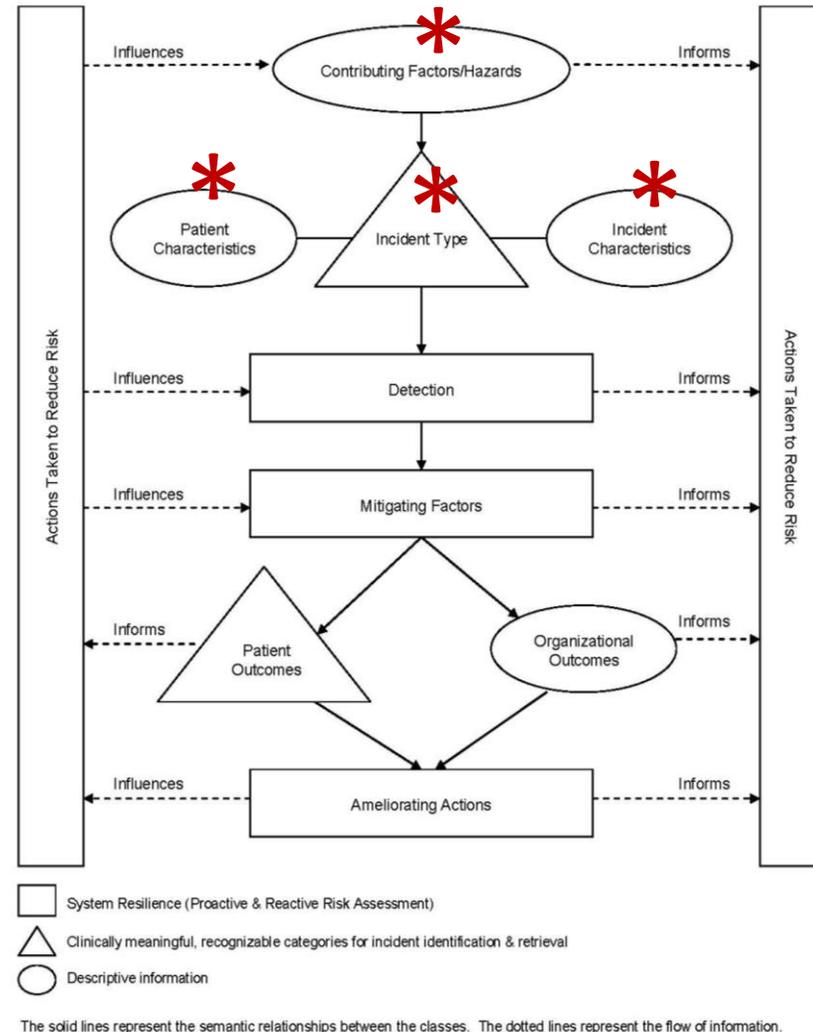


International Classification for Patient Safety (ICPS) The Conceptual Framework

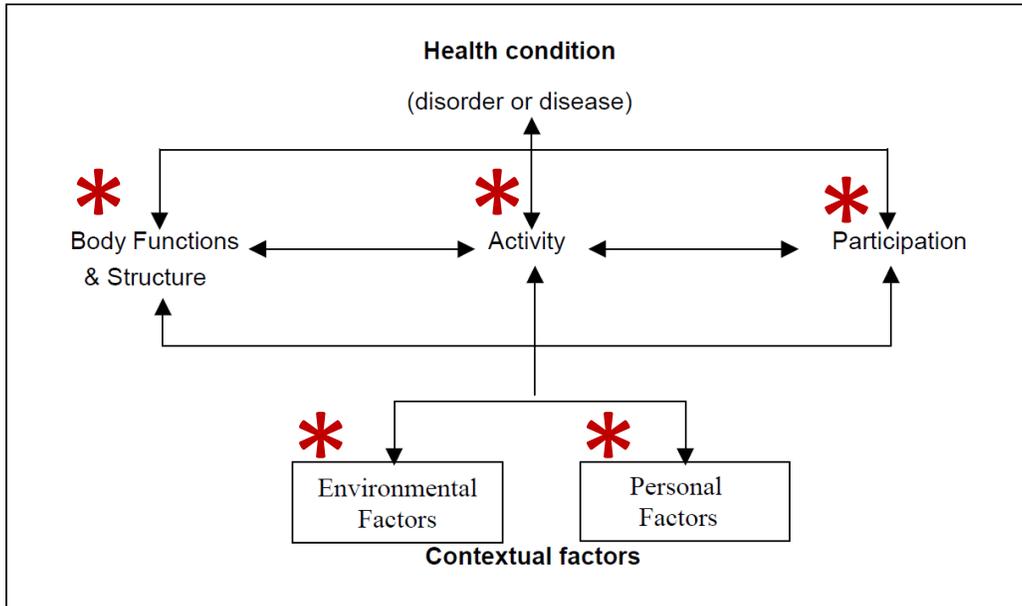
The 10 high level classes:

1. Incident Type*
2. Incident Characteristics*
3. Patient Characteristics*
4. Contributing Factors/Hazards*
5. Patient Outcomes
6. Organizational Outcomes
7. Detection
8. Mitigating Factors
9. Ameliorating Actions
10. Actions Taken to Reduce Risk

*Relevant elements for identification of risk



The International Classification of Functioning, Disability and Health (ICF)



Components and domains

- Body function / structure *
- Activities and participation *
- Environmental factors *
- Personal Factors *

<p>Body Function:</p> <ul style="list-style-type: none"> Mental functions Sensory functions and pain Voice and speech functions Functions of the cardiovascular, haematological, immunological and respiratory systems Functions of the digestive, metabolic, endocrine systems Genitourinary and reproductive functions Neuromusculoskeletal and movement-related functions Functions of the skin and related structures 	<p>Activities and Participation:</p> <ul style="list-style-type: none"> Learning and applying knowledge General tasks and demands Communication Mobility Self care Domestic life Interpersonal interactions and relationships Major life areas Community, social and civic life
<p>Body Structure:</p> <ul style="list-style-type: none"> Structure of the nervous system The eye, ear and related structures Structures involved in voice and speech Structure of the cardiovascular, immunological and respiratory Systems Structures related to the digestive, metabolic and endocrine systems Structure related to genitourinary and reproductive systems Structures related to movement Skin and related structures 	<p>Environmental Factors:</p> <ul style="list-style-type: none"> Products and technology Natural environment and human-made changes to environment Support and relationships Attitudes Services, systems and policies

*Relevant elements for identification of risk

A proposal of a systematic and integrated framework to identify specific risks in elderly people - adapting from WHO ICPS and ICF

- Identification of **risk** from
 - (i) failure of **body functions** (ageing/ illness)
to participate/ execute certain **activities**,
 - (ii) **contributing factors** (personal, environmental),
 - (iii) **care/ treatment process**
resulting in harm.
- To be applied for **individual person/ patient**
&/or for a setting or community at different time frame.
 - Setting: Hospital, Clinic, Ambulatory care
Residential care, Home, Community
 - Time frame: At specific time / place setting
and transition of care

Making use of the 2 frameworks (ICPS and ICP) to identify risk

ICPS	Patient Characteristics	Contributing factors			Incident type	Incident characteristics
ICF	Body functions: Impairment	Environmental	Personal	Activities		

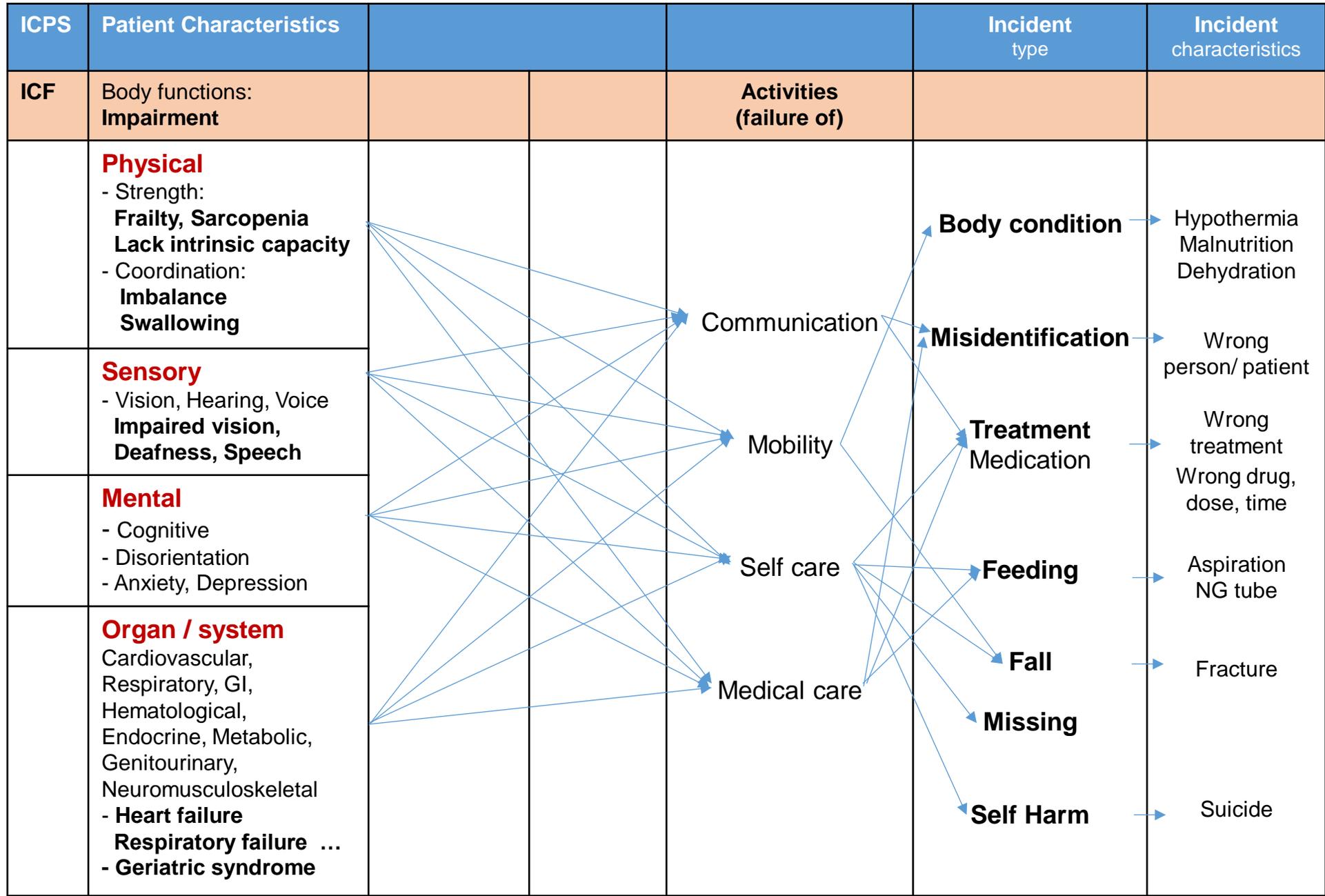
(i) Person/ Patient characteristics

ICF	Body functions: Impairment				
	Physical - Strength: Frailty, Sarcopenia Lack intrinsic capacity - Coordination: Imbalance Swallowing				
	Sensory - Vision, Hearing, Voice Impaired vision, Deafness, Speech				
	Mental - Cognitive - Disorientation - Anxiety, Depression				
	Organ / system Cardiovascular, Respiratory, GI, Hematological, Endocrine, Metabolic, Genitourinary, Neuromusculoskeletal - Heart failure Respiratory failure ... - Geriatric syndrome				

(i) Person/ Patient characteristics

ICF	Body functions: Impairment			Activities (failure of)		
	Physical - Strength: Frailty, Sarcopenia Lack intrinsic capacity - Coordination: Imbalance Swallowing			Communication Mobility Self care Medical care		
	Sensory - Vision, Hearing, Voice Impaired vision, Deafness, Speech					
	Mental - Cognitive - Disorientation - Anxiety, Depression					
	Organ / system Cardiovascular, Respiratory, GI, Hematological, Endocrine, Metabolic, Genitourinary, Neuromusculoskeletal - Heart failure Respiratory failure ... - Geriatric syndrome					

(i) Person/ Patient characteristics



(ii) Contributing factors

ICPS		Contributing factors			Incident type	Incident characteristics
ICF		Environmental	Personal	Activities (failure of)		
		Physical Care/ Clinical process/ procedures Setting		Communication Mobility Self care	Body condition Misidentification Care/ Treatment	Hypothermia Malnutrition Dehydration Wrong patient Wrong treatment Incoordinate care Overtreatment Undertreatment Iatrogenesis
		Chemical (drugs)		Medical care	Medication Feeding Fall	Inaccessibility to care, local resources/ service Medication error Polypharmacy NG Tube Barriers Restraints Fall hazards
		Social Deprivation Isolation Inadequate support Elder abuse	Poverty Body-mind-soul disintegration	Family/ social care	Missing Self Harm Dehumanized care	Suicide Elder Abuse

Combined Patient characteristics & Contributing factors

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ICPS	Patient Characteristics	Contributing factors			Incident type	Incident characteristics
ICF	Body functions: Impairment	Environmental	Personal	Activities (failure of)		
	Physical - Strength: Frailty, Sarcopenia Lack intrinsic capacity - Coordination: Imbalance	Physical Care/ Clinical process/ procedures Setting		Communication Mobility Self care Medical care Family/ social care	Body condition	Hypothermia Malnutrition Dehydration
	Sensory - Vision, Hearing, Voice Impaired vision, Deafness, Speech	Chemical (drugs)			Misidentification	Wrong patient Wrong treatment
	Mental - Cognitive - Disorientation - Anxiety, Depression	Social Deprivation Isolation			Care/ Treatment	Incoordinate care Overtreatment Undertreatment Iatrogenesis
	Organ / system Cardiovascular, Respiratory, GI, Hematological, Endocrine, Metabolic, Genitourinary, Neuromusculoskeletal - Heart failure Respiratory failure ... - Geriatric syndrome	Inadequate support Elder abuse	Poverty Body-mind-soul disintegration		Medication	Inaccessibility to care, local resources/ service Medication error Polypharmacy
					Feeding	NG tube feedng
					Fall	Barriers Restraints Fall hazards
					Missing Self Harm	Suicide
					Dehumanized care	Elder Abuse

Using this proposed framework to assess safety risk in elderly for individual person/patient or for a setting

(1) Individual person/ patient

Provision of care

Self care

Family/social care

Contributory factors to risk

(2) Different settings:

Hospital

Clinic/ Ambulatory care

Residential care/ Home Community

Provision of care

Contributory factors to risk

Communication

(& during transition of care)

Some common specific risks
in elderly people (patient)

Physical – e.g. frailty, sarcopenia, deconditioning

- Fall
 - Fractures
 - Head injuries
- Pressure ulcer
 - Sepsis
- Body function control
 - Hypothermia
- Inadequate care
 - Self neglect
 - Malnutrition
 - Dehydration

Mental – e.g. cognitive function, impairment

- Disorientation
 - Delirium → Use of restrain → harm
 - Disturbing behavior → Self injury
 - Confusion
 - Non-compliance
 - over/under-dose drug
(e.g. warfarin, oral hypoglycaemics);
- Forgetfulness
 - Dementia → Missing
- Anxiety, depression
 - Neurosis / psychosis → Suicide

Care / treatment process

- Treatment error
 - Treatment non-compliance
 - Overtreatment, undertreatment
 - Complication
 - Iatrogenesis
-
- Incoordinate care
 - Inaccessibility to care,
local resources/ service

- Misidentification (person)
- Wrong treatment (error)
Wrong side, operation
- Medication error
Polypharmacy
Drug induced side effect
hypoglycemia, postural hypotension
- Restraints, barriers risk
- Fall
- NG tube misplacement
- Suicide
- Elder Abuse

Environmental/ Setting (example)

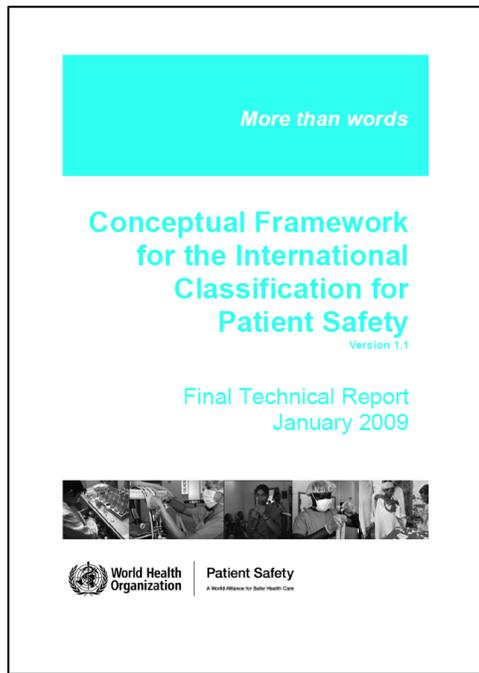
- **Ward / extended care / home setting**

Stairs/Toilet/bathroom

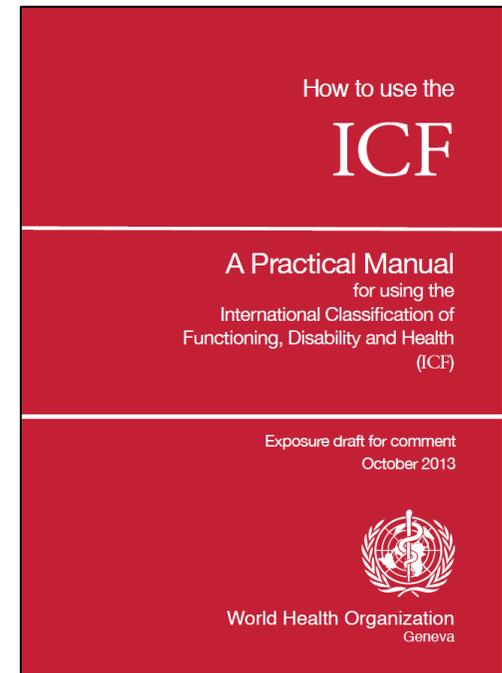
→ Fall risk

Manpower to care for
elderly (confused)

→ Feeding risk
Restraint risk



Anatomy Physiology



Structure – Process – Outcome

Root Cause Analysis

A proposal of a systematic and integrated framework to identify specific risks

in elderly people/patient at different setting

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