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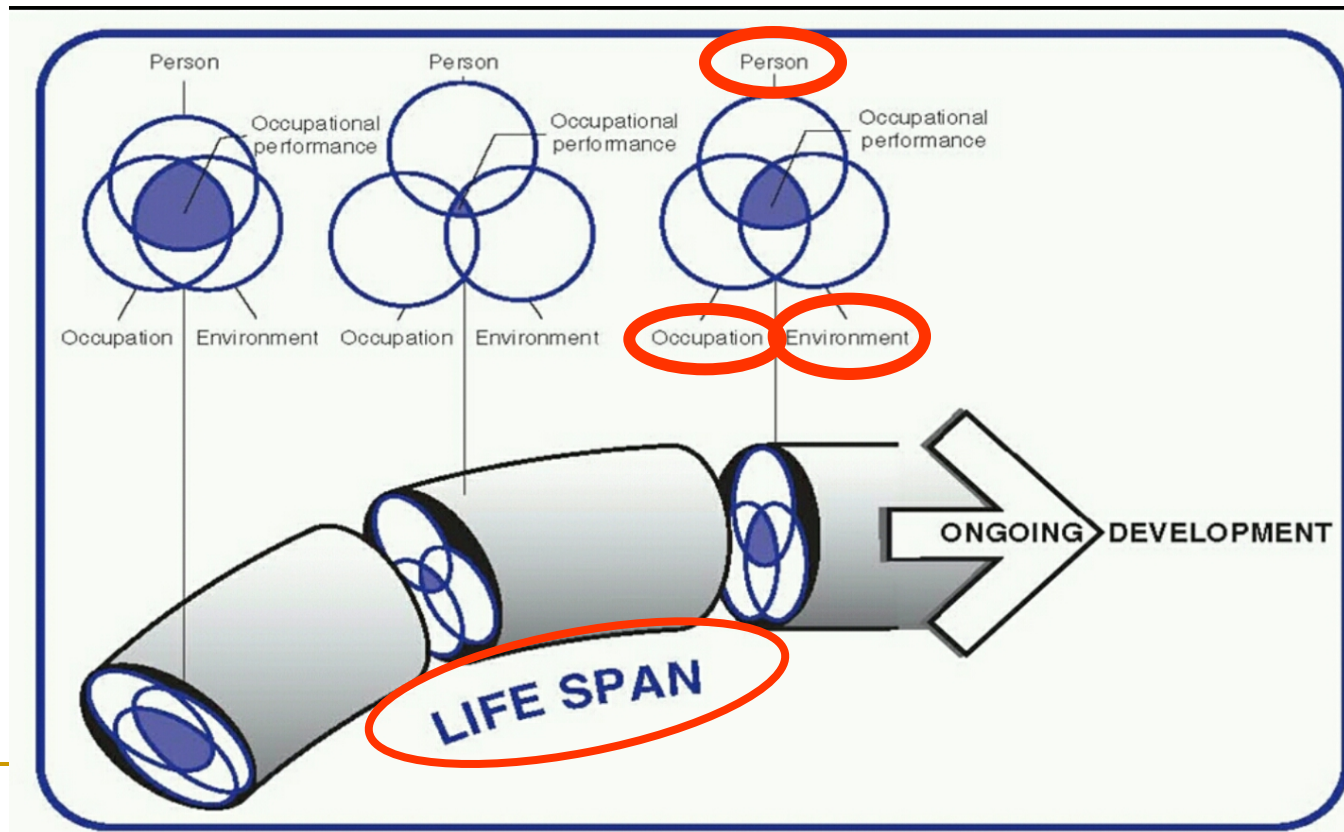
# An Update on the Development of Person-Environment-Occupation (PEO) Fall Prevention Checklist

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- Fall is an important clinical issue in elderly rehabilitation
- A fall task group under elderly service of OTCOC was set up in December 2014
- Members conducted a survey on the existing fall assessments that OT colleagues currently use in different clusters.
- A new fall prevention checklist based on the PEO model was developed



**Person-Environment-Occupation Model**  
(Law et al,1996)

# PEO Fall Prevention Checklist

Hospital Occupational Therapy Department Person-Environment-Occupation (PEO) Fall Prevention Checklist		AFFIX LABEL	
<b>Personal Demographics</b>			
Principal diagnosis:			
Current fall episode demographics: When: <input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Evening <input type="checkbox"/> Night time Where: <input type="checkbox"/> Home (Location: <input type="checkbox"/> Toilet <input type="checkbox"/> Bedroom <input type="checkbox"/> Living room <input type="checkbox"/> Others: ) <input type="checkbox"/> Outdoor (Location: )			
Activity performing:			
Past medical history: <input type="checkbox"/> Hypertension / DM <input type="checkbox"/> Postural Hypotension <input type="checkbox"/> Cardiovascular disease <input type="checkbox"/> Anemia <input type="checkbox"/> Dementia <input type="checkbox"/> Respiratory Disease <input type="checkbox"/> Stroke <input type="checkbox"/> Parkinsonism <input type="checkbox"/> Depression <input type="checkbox"/> Arthritis <input type="checkbox"/> Fracture (location: ) <input type="checkbox"/> Others, please specify:			
History of Fall: <input type="checkbox"/> No <input type="checkbox"/> Yes (No. of fall(s) in recent half year ) History of Syncope: <input type="checkbox"/> No <input type="checkbox"/> Yes (No. of syncope in recent half year )			
ADL performance: <input type="checkbox"/> Barthel Index = / 100 <input type="checkbox"/> FIM: Motor score = / 91, Cognitive score = / 35 TOTAL = / 126			
Cognitive / mental conditions: <input type="checkbox"/> AMT = / 10 <input type="checkbox"/> HK-MoCA = / 30 <input type="checkbox"/> GDS = / 15 <input type="checkbox"/> Other tests, please specify:			
Functional mobility: <input type="checkbox"/> Outdoor walker <input type="checkbox"/> Indoor walker <input type="checkbox"/> Assisted walker <input type="checkbox"/> Supervised walker <input type="checkbox"/> Sitter <input type="checkbox"/> Loyer Aids: <input type="checkbox"/> Unaided <input type="checkbox"/> Stick <input type="checkbox"/> Quadripod <input type="checkbox"/> Frame <input type="checkbox"/> Wheelchair <input type="checkbox"/> Others:			
<b>A. Person</b>			
Date: / /			
1. Physical capacities			
ROM & joint deformities			
a. Restrictions in joint ROM (cervical / thoracic / lumbar spine / hip / knee / ankle)?			
b. Fixed deformities of the knees / feet / hip / ankle / trunk?			
c. Leg length discrepancy?			
Strength			
a. Muscle wasting of UL / LL observed? (Please specify location: )			
b. Muscle weakness of UL / LL observed? (Please specify location: )			
Balance			
a. Impairment in static / dynamic standing balance?			
b. Gait - uncoordinated / imbalanced / dragging?			
c. Imbalance in turning or pivoting?			
d. History of tripping by obstacles or uneven floor (in recent 6 months)?			
Sensation			
a. Impaired lower limb sensation (proprioception / tactile sensation / others: )			
b. Impaired vision (report / observed difficulty seeing - kerbs / stairs / obstacles / signs)?			
c. Experienced dizziness / vertigo when the person moving the body or changing body posture?			
Pain			
a. Musculoskeletal pain (please specify location(s): )			
2. Cognitive - perceptual capacities			
a. Inadequate attention to complete activities?			
b. Poor long term memory / short term memory?			
c. Confusion / difficulty in following instructions?			
d. Visual neglect / body neglect?			
3. Psychological/Emotional Responses & Mood			
a. Fear of fall that restricts activities they capable of doing?			
b. Unstable mood or emotional problems?			
4. Behaviors & Habits			
a. Lack of safety awareness or insight?			
b. Impulsive behaviors / rushed pace / fall risk taking habits?			
c. Unprotected mobility / faulty use of assistive devices?			
5. Medications			
a. ≥ 4 medications?			
b. Use of any of the following drugs: anxiolytic, hypnotics, antipsychotics, diuretic, antidepressants, alpha blocker, anti-arrhythmic, anti-parkinson, anticonvulsant?			
c. Difficulty in managing medications / drug compliances problems?			
6. Nutrition			
a. Weight loss / loss of appetite / signs of dehydration?			
<b>B. Environment</b>			
1. Living environment			
a. Poor ergonomics: e.g. Improper bed/chair/water closet dimension; insufficient/improper aid?			
b. Indoor hazards: skid floor / no proper chair / inappropriate lighting / cluttered rooms / poor circulation space for gait aids / no handrails support in toilet or bathing area / threshold / stairs			
c. Outdoor hazards present: uneven ground / obstacles / stair walking / inappropriate lighting / skid floor / kerbs / stairs			
d. Ill-fitting clothing / fall prone shoes / sandals?			
2. Social Support			
a. Poor social support?			
b. Insufficient Community Support? (with no following services received: e.g. MOW / Home Help / COT / CPT / CNS / IHCT / DCC / EHCCS / ICDS)			
<b>C. Occupation</b>			
1. ADL / home / work / leisure			
a. Activities induce fall prone posture (standing / bending / carrying)?			
b. Difficulty in performing functional transfer? (bed / chair / toilet / tub)			
c. Continence issue: Incontinence / frequent urination / nocturia?			
d. Risky IADL habits: standing on unstable furniture (folding chair) / sit on low stool to wash clothes?			
e. Unsafe ADL habits: standing for lower garment dressing or foot washing / sit on low stool to bath?			
2. Life Routine			
a. Homebound / going outdoor ≤ once per week?			
b. Imbalance lifestyle in self-care / productivity / leisure / rest?			
c. Lack of regular physical activities in daily routine?			
Therapist:			
Setting (in / day / out / community):			
<b>OT Management recommended by PEO Model</b>			
Prioritize risk factors		Management	
1.		<input type="checkbox"/> ADL / Functional training	
2.		<input type="checkbox"/> Fall prevention education	
3.		<input type="checkbox"/> Home modification / Assistive aids prescription	
4.		<input type="checkbox"/> Community Occupational Therapy	
5.		<input type="checkbox"/> OT out-patient	
		<input type="checkbox"/> Lifestyle redesign	
		<input type="checkbox"/> Pain management	
		<input type="checkbox"/> Refer to others parties (e.g. MOW / Home Helper / CPT / CNS / IHCT / DCC / EHCCS / ICDS or others: )	
		<input type="checkbox"/> Others:	

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- The first trial run was conducted on medical and geriatric patients.
  - A workshop on the use of the fall prevention checklist was conducted on 14/10/2016.
  - The attending OTs were requested to conduct in-service trainings to their respective clusters before starting the use of the checklist.
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# Preliminary Results

- Trial run in different clusters from October 2015 to February 2016.
- 139 elderly cases were assessed (mean age 78.23, mean MBI 73.14, mean MMSE score 20.24)
- Feedbacks and comments from 27 OT colleagues were positive.
- The average administration time was only 10-15 minutes.
- The top ten high risk factors contributing to fall incidents were identified.

People		
Balance	Impaired static /dynamic standing balance	70 %
Strength	Muscle weakness of UL/LL	56 %
Medication	> 4 medications	53 %
Behaviors	Impulsive behaviors / rush	38 %
Behaviors	Lack of safety awareness	46 %
Cognition	Poor LTM or STM	43 %
Environment		
Living Environment	Indoor Hazards	34 %
Occupation		
Life Style	Lack of regular physical activities in daily routine	48 %
ADL - functional	Difficulty in performing functional transfer	47 %
ADL - habits	Unsafe ADL habits	38 %

