

**DATA COLLECTION SHEET FOR MAPO INDEX**

HOSPITAL : \_\_\_\_\_  
 UNIT : \_\_\_\_\_

date \_\_\_\_\_  
 No BEDS: \_\_\_\_\_

**1. INTERVIEW**

TOTAL Nursing Staff: Nurses: \_\_\_\_\_ Nurse Assistants (N.A.) \_\_\_\_\_ No operators unfitted for patient MH (\_\_\_)

NURSING STAFF ENGAGED IN PATIENT TRANSFERRING OVER 3 SHIFTS:

Morning \_\_\_\_\_ Afternoon \_\_\_\_\_ Night \_\_\_\_\_ Total No Operators [\_\_\_] Op

**TYPE OF PATIENT:**

DISABLED (D.) _____ (indicate daily average Number of D patients)
Maximum number of present disabled patients: _____ (N.A.P.) Average hospitalization stay of disabled patient _____ (days)
Non-cooperative patients (NC) No _____ Partially cooperative patients (PC) No _____

DISABLED PATIENTS	No N.C.	No P.C.
elderly		
hemiparesis		
surgical		
severe ictus/stroke		
other neurologic movement disorders		
fracture lower limbs		
bariatric patients		
other		

Which manual (D) patient transfer operations are usually performed?:	NC	PC
pulling up to the head of bed		
repositioning patients (SIDE TO SIDE)		
bed/wheelchair and back		
wheelchair (or chair)/ upright		
bed-trolley/stretchers and back		
wheelchair /toilet and back		
other		
other		

Are disabled patients unable to hold some particular position during transfer ?  Yes  No Describe in NOTE

ARE LIFTING DEVICES USUALLY USED? <input type="checkbox"/> YES <input type="checkbox"/> NO if YES, for which (D) patient transfer operations :
pulling up to the head of bed      repositioning patients      bed/wheelchair      wheelchair (or chair)/ upright
bed-trolley/stretchers      wheelchair/toilet      other
if not USED, why? <input type="checkbox"/> not up to the unit requirements <input type="checkbox"/> lack of training <input type="checkbox"/> often broken
<input type="checkbox"/> too time consuming <input type="checkbox"/> not enough space for use

**STAFF TRAINING IN MANUAL PATIENT HANDLING**

not given      included in training course  
 given only via training course on use of aids      only via information brochures

If CARRIED OUT, to how many operators ? [\_\_][\_\_] and how many hours per operator [\_\_]

If carried out, how many months ago? [\_\_][\_\_] Was training course effectiveness checked? YES NO



**STRUCTURAL FEATURES OF ENVIRONMENT BATHROOMS (centralized or individual in rooms):**

**TYPE OF BATHROOMS WITH SHOWER/BATH**

FEATURES AND INADEQUACY SCORE OF BATHROOMS WITH SHOWER/BATH centr = centralized in ward indiv. = in room	Score	A	B	C	D	E	
		<input type="checkbox"/> centr	<input type="checkbox"/> centr	<input type="checkbox"/> centr	<input type="checkbox"/> centr	<input type="checkbox"/> centr	
		<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	
		No	No	No	No	No	
Free space inadequate for use of aids	2						Total No bathrooms  ___
Door opening inwards (not outwards)							
No shower							
No fixed bath							
Door width less than 85 cm	1						Total score For bathrooms:
Non-removable obstacles	1						
<b>Column score (No Bathrooms x sum of scores)</b>							

Mean score bathrooms (M.S.B.) = total score bathrooms/total N. bathrooms : |\_\_\_| **MSB**

**TOILETS (WC) (centralized or individual in rooms):**

**TYPE OF TOILETS (WC)**

FEATURES AND INADEQUACY SCORE OF TOILETS centr = centralized in ward indiv. = in room	Score	A	B	C	D	E	
		<input type="checkbox"/> centr	<input type="checkbox"/> centr	<input type="checkbox"/> centr	<input type="checkbox"/> centr	<input type="checkbox"/> centr	
		<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	<input type="checkbox"/> indiv.	
		No	No	No	No	No	
Free space insufficient to turn wheelchair round	2						Total No Toilets (WC)  ___
Door opening inwards (not outwards)							
Insufficient Height of WC (below 50 cm)	1						
WC without grab bars	1						Total WC score
Door width less than 85 cm	1						
Space at side of WC less than 80 cm	1						
<b>Column score (No Toilets x sum of scores)</b>							

Mean score (M.S.WC.) = total WC score/No WC: |\_\_\_| **MSWC**

**PATIENT ROOMS CONFIGURATION**

FEATURES AND INADEQUACY SCORE OF WARDS	Score	PATIENT ROOMS					
		No ___ Rooms	No ___ Rooms	No ___ Rooms	No ___ Rooms	No ___ Rooms	
Space between beds or between bed and wall less than 90 cm	2						Total No Rooms  ___
Space between foot bed and wall less than 120 cm	2						
Presence of non-removable obstacles							
Fixed beds with height less than 70 cm							
unsuitable bed : needs to be partially lifted	1						Total Rooms score
Inadequate side flaps							
Space between bed and floor less than 15 cm	2						
Beds with 2 wheels or without wheels							
Height of armchair seat less than 50 cm	0,5						
<b>Column score (No Wards x sum of scores)</b>							

Mean score Rooms (M.S.R.) = total score wards/total No Rooms |\_\_\_| **MSR**

**ENVIRONMENT: MEAN ENVIRONMENT SCORE = M.S.B. + M.S.WC.+ M.S.R. = |\_\_\_| MSE**



<b>MAPO INDEX</b>							
<b>HOSPITAL :</b> _____			<b>UNIT :</b> _____				
<b>NUMBER OF DISABLED PATIENTS/OPERATORS RATIO</b>							
No Non-cooperative patients (NC) _____mean			No operators _____ =		_____ <b>NC/OP</b>		
No Partially cooperative patients (PC) _____mean			No operators _____ =		_____ <b>PC/OP</b>		
<b>LIFTING DEVICE FACTOR (LF)</b>				<b>VALUE OF LF</b>		_____  <b>LF</b>	
Absent OR Inadequate+Insufficient Lifting Devices				<b>4</b>			
Insufficient OR Inadequate Lifting Devices				<b>2</b>			
Adequate AND Sufficient Lifting Devices				<b>0.5</b>			
<b>MINOR AIDS FACTOR (AF)</b>				<b>VALUE OF AF</b>		_____  <b>AF</b>	
Minor Aids Absent OR Insufficient				<b>1</b>			
Minor Aids Sufficient AND Adequate				<b>0.5</b>			
<b>WHEELCHAIR FACTOR (WF)</b>							
Mean wheelchair score (MSWh)		0.5 – 1.33		1.34 – 2.66		2.67 - 4	
Numerically sufficient		YES	NO	YES	NO	YES	NO
<b>VALUE OF WF</b>		<b>0.75</b>	<b>1</b>	<b>1.12</b>	<b>1.5</b>	<b>1.5</b>	<b>2</b>
<b>ENVIRONMENT FACTOR (EF)</b>							
Mean environment score (MSE)		0 – 5.8		5.9 – 11.6		11.7 – 17.5	
<b>VALUE OF EF</b>		<b>0.75</b>		<b>1.25</b>		<b>1.5</b>	
<b>TRAINING FACTOR (TF)</b>				<b>VALUE OF TF FACTOR</b>			_____  <b>TF</b>
Adequate training				<b>0.75</b>			
Only information				<b>1</b>			
No training				<b>2</b>			

$$\text{MAPO INDEX} = \left( \left( \frac{\text{NC/OP}}{\text{LF}} + \frac{\text{PC/OP}}{\text{AF}} \right) \times \frac{\text{WF}}{\text{EF}} \times \text{TF} \right) = \boxed{\phantom{000}}$$

(enter data in software "MAPO SOFTWARE-READY TO USE".xls)

MAPO INDEX	EXPOSURE LEVEL
0	ABSENT
0,1 – 1.5	NEGLIGIBLE
1.51 – 5	MEDIUM
> 5	HIGH