

Five years' overview of employment outcomes of injured workers in work rehabilitation program in Princess Margaret Hospital in Hong Kong



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Introduction

- The Hong Kong Hospital Authority (HA) provides public healthcare services in seven clusters based on locations in Hong Kong



1. Hong Kong East Cluster
2. Hong Kong West Cluster
3. Kowloon Central Cluster
4. Kowloon East Cluster
5. Kowloon West Cluster
6. New Territories East Cluster
7. New Territories West Cluster



Ten designated work rehabilitation centers



Tang Shiu Kin Hospital



Princess Margaret Hospital



Kwong Wah Hospital



Queen Elizabeth Hospital



Pamela Youde Nethersole Eastern Hospital

10 designated work rehabilitation centers located at Occupational Therapy department in 7 clusters



United Christian Hospital



David Trench Rehabilitation Centre



Tuen Mun Hospital



Prince of Wales Hospital



Alice Ho Miu Ling Nethersole Hospital

Work Rehabilitation Center (Princess Margaret Hospital)

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The work rehabilitation center has been established in Princess Margaret Hospital in 2003.

- OTs provided functional capacity evaluations (FCEs), work conditioning and work hardening programs



Work Rehabilitation Center (Princess Margaret Hospital)

- ▣ **Patient Retraining & Vocational Resettlement Services (1997)** collaborated with the Employees Retraining Board - an independent statutory body established in 1992 under the Employees Retraining Ordinance in Hong Kong > provide job resettlement services for injured worker to seek new jobs



Work Rehabilitation Center (Princess Margaret Hospital)

- Adopt a standardized approach guided by clinical practice guidelines

Clinical Guidelines on Occupational Therapy Work Rehabilitation Program for People with Physical dysfunction (2nd Edition, 2008)

Occupational Therapy Reference on Return to Work Program 2015 (1st Edition)



Work Rehabilitation Center (Princess Margaret Hospital)

2. Clinical Audit

Clinical Audit on 10 designated Work Rehabilitation Centers in every two years since 2002

- No. of New Referrals
- Manpower
- Part I: Programme structure
 - Scope of Programme, Work Capacity Evaluation, Work Hardening, Work Resettlement, Return to Work Programme, Work Safety & Health, Space & Equipment, Staff Expertise

No. of New Referrals		2010	2011
Referrals		100	120
Programme		100	120
Part I: Programme structure			
1. Scope of Programme (KPI)			
2. Work Capacity Evaluation			
3. Work Hardening			
4. Work Resettlement			
5. Return to Work Programme			
6. Work Safety & Health			
7. Space & Equipment			
8. Staff Expertise			
Part II: Programme Process			
1. Safety & Admission criteria			
2. Evaluation			
3. Intervention			
4. Reporting to referring agent			
5. Termination			
6. Outcome Documentation			
7. Minimal Data Set			
Overall Comments			

Work Rehabilitation Center (Princess Margaret Hospital)

Clinical Audit on 10 designated Work Rehabilitation Centers in every two years since 2002

- Part II: Programme Process
 - Safety & Admission criteria
 - Evaluation
 - Intervention
 - Reporting to referring agent
 - Termination
- Outcome Documentation
 - Presence of Outcome Documentation
 - Minimal Data Set
- Overall comments

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Part I: Programme structure			
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1. Safety & Admission criteria			
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7. Minimal Data Set			
Overall Comments			

Work Rehabilitation Center (Princess Margaret Hospital)

3. Annual vocational rehabilitation training to ensure professional competency

- n Online courseware
- n Seminars
- n Workshops & labs



Work Disability Management (2013)



Seminar "Work Disability Management" on 20 January 2015



BTE Evaltech Workshop in 2014

Work Rehabilitation

- Work Rehabilitation is one of the essential components of vocational rehabilitation intervention aimed at re-integrating injured workers with work disability into work.



Study Design

- A retrospective study in reviewing the employment outcomes of injured workers in work rehabilitation program in PMH between the period of 1 April 2008 & 31 March 2013
 - data captured from clinical data set specially designed for the work rehabilitation centers in HA
 - Samples recruited:
 - A. referred for work rehabilitation by physician
 - B. completed the work rehabilitation program
 - C. completed the post 3-month employment telephone interview

Study Design

- After completing the work rehabilitation program, a telephone interview was conducted with a specifically designed questionnaire in a 3-month period to capture their current condition & employment status.

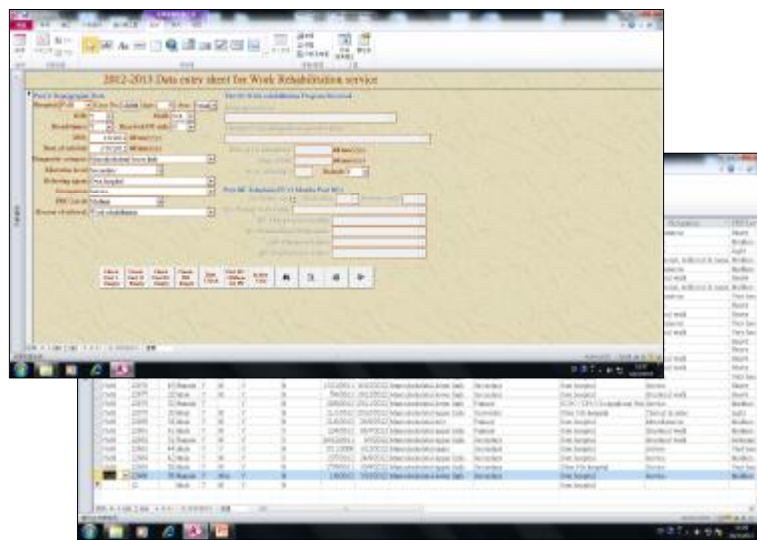


RTW?

Post 3-month employment outcome questionnaire

Clinical data set using Microsoft Access

Clinical data set using Microsoft Access



Results

- 1361 samples were recruited in this analysis
- 967 males, mean age was 46.4 (sd=10.4) and 394 females, mean age was 47.5 (sd=9.2)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	967	71.1	71.1	71.1
	Female	394	28.9	28.9	100.0
	Total	1361	100.0	100.0	
Total		1361	100.0		

Results

- Education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nil	40	2.9	3.0	3.0
	Primary	433	31.8	32.4	35.4
	Secondary	803	59.0	60.1	95.5
	Technical school	36	2.6	2.7	98.2
	University	24	1.8	1.8	100.0
	Total	1336	98.1	100.0	
Missing	System	25	1.9		
Total		1361	100.0		

Education level	Percentage
Nil	2.9
Primary	31.8
Secondary	59.0
Technical school	2.6
University	1.8

Results

The diagnostic categories of subjects were:

- ▣ musculoskeletal-upper limb (34.2%)
- ▣ musculoskeletal-lower limb (22.0%)
- ▣ musculoskeletal-spine (20.8%)
- ▣ musculoskeletal-mix (9.6%)
- ▣ head injury/neuro. problems (6.0%)
- ▣ others (7.4%)

➔ 86.6%

		Diagnostic category			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Burn	3	.2	.2	.2
	CTD	6	.4	.4	.7
	CVA /	50	3.7	3.7	4.3
	Cardiac				
	Head	81	5.9	6.0	10.3
	Injury/Neuro.				
	Multiple Dx	13	1.8	1.0	11.2
	MSD - LL	300	22.0	22.0	33.3
	MSD - Mix	130	9.6	9.6	42.8
	MSD - spine	283	20.8	20.8	63.6
	MSD - UL	466	34.2	34.2	97.9
	Oncology	5	.4	.4	98.2
	Other	24	1.8	1.8	100.0
	Total	1361	100.0	100.0	
Total	1361	100.0			

Results

The samples were group under 9 occupational categories of local job bank (based on the Dictionary of Occupational Titles) as below:

- ▣ Agricultural/Fishery/Forestry
- ▣ Bench work
- ▣ Clerical & sales
- ▣ Machine trades
- ▣ Miscellaneous
- ▣ Processing
- ▣ Professional, technical & managerial
- ▣ Services
- ▣ Structural work

Results

Others (26.1%) & unemployed (2.6%)

		Occupation			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agricultural/Fishery/Forestry	5	.4	.4	.4
	Bench work	4	.3	.3	.7
	Clerical & sales	49	3.6	3.6	4.3
	Machine trades	47	3.5	3.5	7.7
	Miscellaneous	171	12.6	12.6	20.3
	Processing	34	2.5	2.5	22.8
	Professional, technical & managerial	44	3.2	3.2	26.1
	Services	658	48.3	48.5	74.5
	Structural work	311	22.8	22.9	97.4
	Unemployed	35	2.6	2.6	100.0
	Total	1362	99.7	100.0	
Miss	System	4	.3		
Total		1362	100.0		

Results

Physical Demand Characteristics of their jobs

		Physical Demand Characteristics			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NA	36	2.6	2.7	2.7
	Sedentary	38	2.8	2.8	5.5
	Light	124	9.1	9.1	14.6
	Medium	472	34.7	34.8	49.4
	Heavy	456	33.5	33.6	83.0
	Very Heavy	230	16.9	17.0	100.0
	Total	1356	99.6	100.0	
Missing	System	5	.4		
Total		1361	100.0		

PDC level	Percentage
Sedentary	2.8
Light	9.1
Medium	34.7
Heavy	33.5
Very Heavy	16.9

Results

- All subjects have received work rehabilitation including Work Capacity Evaluations (WCEs) & Work Rehabilitation Program (Work Conditioning & Work Hardening)
- The mean number of treatment sessions was 14.2 (sd= 5.7)

Results

- Logistic regression analysis was used to examine the association among the potential independent variables and employment outcomes (IBM SPSS Statistics 19)
- A dichotomous variable of employment outcomes was defined as “Return To Work” (RTW) & “not able to RTW”
(RTW was defined as open employment or self-employment that was performed on a full-time or part-time basis)

Results

- Among them, 774 (56.9%) were able to resume job and 587 (43.1%) were not able to resume job after receiving the work rehabilitation program in PMH.

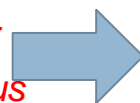
Classification Table^{a,b}

		Predicted		Percentage Correct
		Resume work 0	Resume work 1	
Observed	Resume work 0	0	587	43.1
	Resume work 1	0	774	56.9
Overall Percentage				56.9

a. Constant is included in the model.
b. The cut value is .500

Results

- Age**
- The status of breadwinner**
- Medical Assessment Status**
- Physical Demand Characteristic of job**



Independent variables in RTW rate

Odd Ratio:

Age OR = 2.96, 95% CI: 2.75 – 3.17
 Breadwinner OR = 1.62, 95% CI: 1.49 – 1.88
 MAB OR = 4.65, 95% CI: 4.49 – 4.85
 PDC OR = 1.96, 95% CI: 1.73 – 2.18

Variables not in the Equation

Step 0	Variables	Score	df	Sig.
	Age	45.471	1	.000
	Breadwinner	15.973	1	.000
	Sex	1.506	1	.220
	Diagnostic category	3.555	1	.059
	No of therapy session	.496	1	.481
	MAB	64.870	1	.000
	PDC level	36.899	1	.000
	All Statistics	130.930	7	.000

Risk Estimate

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Age	-.037	.006	42.617	1	.000	2.963	2.752	3.174

Conclusions

RTW group :

		RTW			Curr
		Frequency	Percent	Valid Percent	Pe
Valid	Full time	515	66.5	66.5	66.5
	Full time self-employed	6	.8	.8	67.3
	Part time steady	217	28.1	28.1	95.4
	Part time unsteady	36	4.6	4.6	100.0
	Total	774	100.0	100.0	
Miss	System	0	0		
Total		774	100.0		

Full time job
67.3%
Part time job
32.7%

Conclusions

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Non RTW:

		Non RTW			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Housewife	13	2.2	2.2	2.2
	Seeking job	70	11.9	11.9	14.1
	Retired due to disability	31	5.3	5.3	19.4
	Retired due to old age	24	4.1	4.1	23.5
	Sick Leave	432	73.6	73.6	97.1
	Other	17	2.9	2.9	100.0
	Total	587	100.0	100.0	
Miss	System	0	0		
Total		587	100.0		

Sick Leave
73.6%

Conclusions

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Limitations of this study:

- potential confounders not in the data set cannot be investigated such as:
 - RTW coordination (William Shaw, Quan-nha Hong, Glenn Pransky, Patrick Loisel, 2008)
 - 6 preliminary competency domains:
 - (1) ergonomic & workplace assessment
 - (2) clinical interviewing
 - (3) social problem solving
 - (4) workplace mediation
 - (5) knowledge of business & legal aspects
 - (6) knowledge of medical conditions.
 - Discussion principal activities of RTW coordination: workplace assessment, planning for transitional duty, facilitating communication & agreement among stakeholders.



Conclusions

Limitations of the study:

- potential confounders not in the data set cannot be investigated:
 - Psychosocial variables: recovery expectation, fear avoidance, low social support from supervisors & colleagues, low decision latitude, high psychosocial work demands, a poor subjective prognosis, etc.



Conclusions

- ∴ Limitations of the study:
 - ⊠ Other potential confounders such as employee compensation & legal issues...
 - ⊠ Study design, e.g. convenience sampling
 - ⊠ Job sustainability was another major concern in RTW for injured workers

Acknowledgement

- ∴ Ms. Stella Cheng, KWC Allied Health Service Coordinator (Occup)/ Department Manager, PMH/NLTH, Hong Kong
- ∴ Ms. Sanne Fong, SOT, Princess Margaret Hospital, Hong Kong
- ∴ Outpatient team (work rehabilitation)

