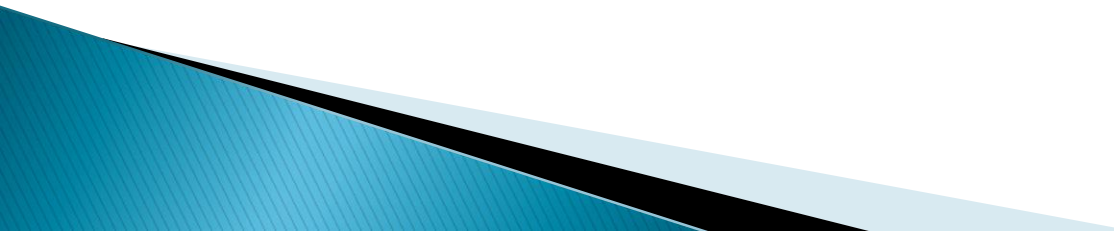


Northwick Park Care Needs Assessment (NPCNA)

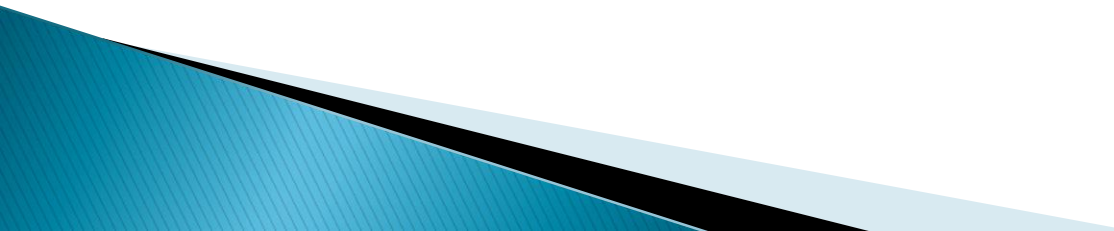
Self-service Training slides
Part 3 of 3

Contents

1. NPCNA
 2. Rules/assumptions within computer algorithm
 3. UK ROC software
 4. UK ROC outputs
 5. How to use the computer outputs
- 

NPCNA

Northwick Park Care Needs Assessment (NPCNA)

- Provides an assessment of care needs
 - Derived from NPDS using a computerised algorithm based on a set of validated “rules/assumptions”
 - Provides an estimation of care needs/care costs
- 

Rules / Assumptions

Rules/Assumptions

- There are many in-built rules in the computer algorithm for estimating care hours/costs
- Rules are based on common habit

For example:

Item 8.1 Eating

- If help is required to eat,
 - Assumption
 - this will occur 3 times a day (breakfast, lunch and supper)
 - help will be needed from 1 person
 - time required each meal time will be $\frac{1}{4}$ – 1 hour

Rules / Assumptions

Example of algorithm for calculation of care needs

9. Skin Pressure Relief					
		Dependency	Care Needs		
			Number of people	Time	Times/day
a)	Skin intact/able to relieve pressure independently	0	0	0	0
b)	Needs prompting only to relieve pressure	1	(Alarm)		
c)	Skin intact, need help from 1 to turn (4hrly)	2	1	15 mins	3
d)	Skin intact, need help from 2 to turn (4hrly)	3	2	15 mins	3
e)	Skin marked or broken, needs 1 to turn (2hrly)	4	1	15 mins	6
f)	Skin marked or broken, need 2 to turn (2hrly)	5	2	15 mins	6

United Kingdom Rehabilitation Outcome Collaborative (UK ROC) software

- NPCNA is derived from entering the NPDS-H information in to the UK ROC software
- Rules and Assumptions are pre-programmed into the software
- UK ROC software is Excel based and contains macros to calculate care hours/costs
- Freely available from LNWH-tr.ukroc@nhs.net
- Software user-guide sent with database

UK ROC software outputs

- Every NPDS-H assessment entered will generate
 - Individualised timetable of care for 1-2 carers
 - Calculation of approximate care hours required per week
 - Type of care package to meet those hours
 - An estimation of weekly cost of care
- Comparison between 2 assessments can be viewed in a graphical format
- Change over time is presented as a bar chart
- Ward review
 - Worksheet providing detailed information
 - Number of patients in each NPDS-H category
 - Care hours at specific time points
 - Number requiring 2 carers at specific time points

NPDS-H Display sheet (BCN)


Includes an overview of all the scores entered for one assessment.

Top half of display sheet showing Basic Care Needs

To view a different assessment for the same patient use the drop down arrow in the software

Northwick Park Dependency Score - H (NPDS-H)

Menu

Hospital:	
Unit:	
Patient:	X, Patient
Assessment:	1. Fortnightly - 16 Jan 2017 

	Basic Needs	Score
1. Mobility	c Walks with assistance/supervision of one	2
2. Bed transfers	b Requires help from one person with 1 extra rest(s) during the day	1
3. Toileting: bladder	d Needs help/supervision from one and takes less than fifteen minutes Daytime: More than 6 times; Nighttime: Twice	2
Urinary accidents	a No accidents or leakage from convence/catheter	0
4. Toileting: bowels	d Needs help from one and takes more than 15 minutes Once a day Daytime: variable Overnight: None	3
Faecal accidents	a No faecal accidents	0
5. Wash - Groom	b Needs help to set up only (e.g. laying out things)	1
6. Bath - Shower	c Needs help from one and takes less than thirty minutes	2
7. Dressing	d Needs help from one and takes less than 15 minutes	2
8. Eating	c Needs help to set up only (e.g. opening packs, passing special cutlery)	1
Drinking	b Able to pour own drink and drink it independently	0
Enteral feeding	a No enteral feeding or able to manage feeds independently	0
9. Skin pressure relief	a Skin intact and able to relieve pressure independently	0
10. Safety awareness	b Requires help to maintain safety, safe to be left for > 2 hours	1
11. Communication	a Able to communicate all needs	0
12. Behaviour	a Compliant and socially appropriate	0
Total Basic Needs		15

Basic Care needs
score

NPDS-H Display sheet (SNN & INN)

Lower part of display sheet showing Special Nursing Needs Section and In-patient Nursing needs section

Special Needs		Score
Tracheostomy	no	0
Open pressure sore/wound requiring dressings	no	0
More than two interventions required at night	no	0
Patients or relatives need substantial psychological support	no	0
MRSA screening/isolation	no	0
Intercurrent medical/surgical problem	no	0
Needs one to one specialing	no	0
Total Special Needs		0

Special nursing needs score

Total Dependency Score (NPDS)	15
-------------------------------	----

Original NPDS score

Inpatient Nursing Needs		Score
1. Tracheostomy	a No tracheostomy in situ/self management	0
2. Wound Dressing	a No wound dressing/self management	0
3. Medication	b Supervised practise - patient dispenses & takes medication under supervision	1
	4 times per day	
4. Psychological Support	b Require frequent reassurance - can be provided by any care staff	1
5. Serial/Resting Splints	b Simple splint application, 1 person with no prior stretching Once during the day	1
6. Postural Management	a Able to maintain own posture	0
7. Intercurrent Problems	b Requires daily monitoring of vital signs	1
8. One to one specialing	a No one to one specialing required	0
Total Inpatient Nursing Needs		4

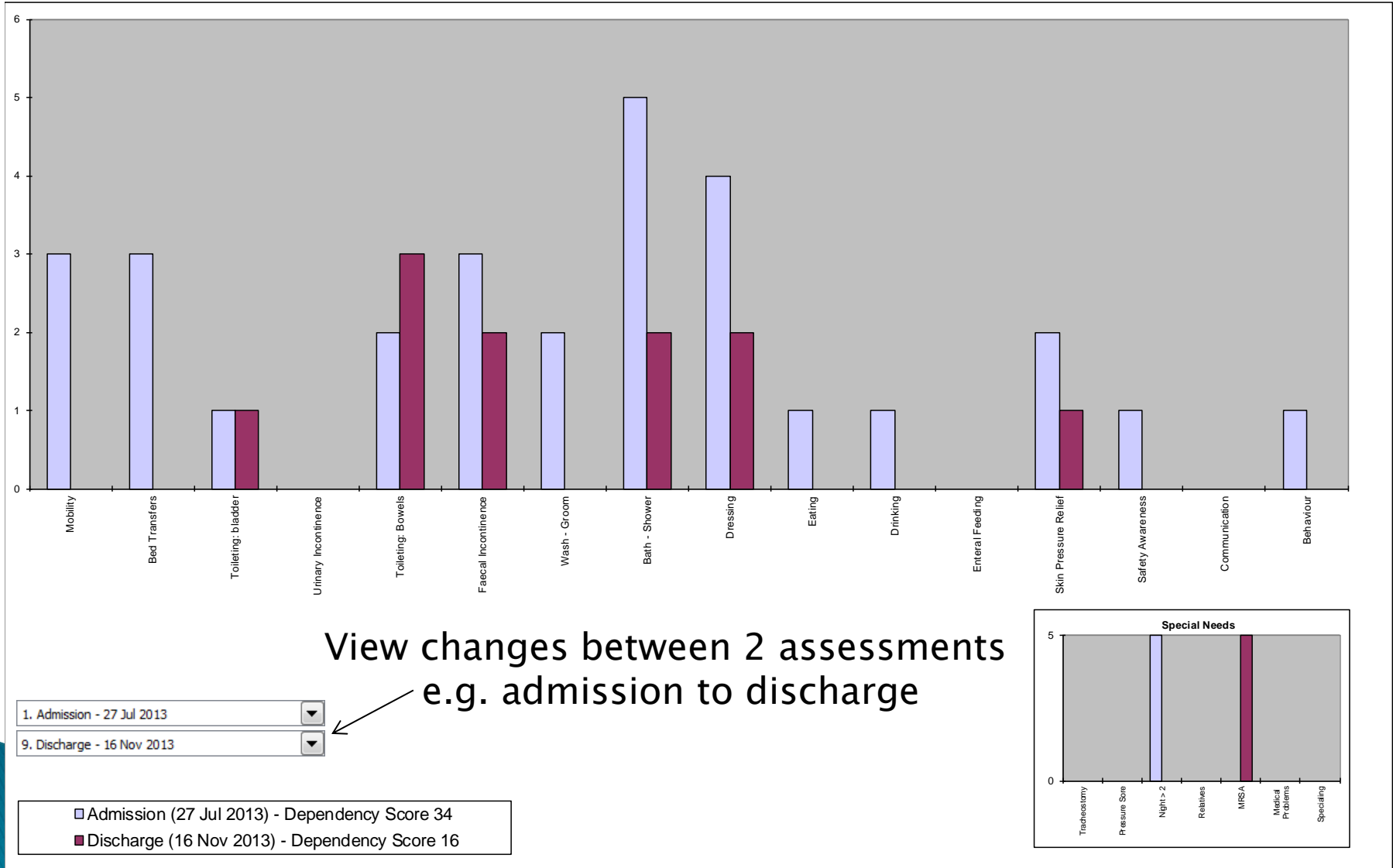
Inpatient nursing needs score

Total Dependency Score (NPDS-H)	19
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NPDS-H total score

Assessment Comparison Graph

Two assessments can be compared to show where NPDS-H scores have changed



Understanding care hours

1. Total care hours – all the allocated time entered into the timetable of care is summated to obtain the total care time for each time period. It does not take in to account that in real life many activities are completed simultaneously and therefore the time taken is much less. The restricted care hours overcomes this issue.
2. Restricted care hours – applies a cap of a minimum of ½ hour to a maximum of 2 hours for each time period
3. Restricted care hours reflect practice e.g. activities often combined at a time point such as bowel care, washing & dressing
4. More than 4 calls per day automatically generates a “live-in carer” as part of the package of care.
5. Incontinence greatly increases care costs

NPCNA 1st Carer timetable

Based on assessment and assumptions, care hours are calculated at various time points throughout the day for a maximum of 2 carers

Northwick Park Care Needs Assessment	
Hospital:	
Unit:	
Patient:	X, Patient
Assessment:	1. Fortnightly - 16 Jan 2017

Menu

1st
carer

1st carer	Morning	Mid-morning	Mid-day	Mid-afternoon	Evening	Bed-time	Night-time
1 Bed transfers	0.25					0.25	
2 Stairs							
3 Toileting: bladder	0.25	0.25	0.25	0.25	0.25	0.25	2
4 Toileting: bowels	0.5						0
5 Washing and grooming	0.25					0.25	
6 Bathing/showering	0.5						
7 Dressing	0.5					0.5	
8 Self care tasks	2.25	0.25	0.25	0.25	0.25	1.25	2
9 Meal preparation	0.25		0.25		0.25		
10 Eating	0.25		0.25		0.25		
11 Drinking							
12 Enteral feeding							0
13 Feeding	0.5	0	0.5	0	0.5	0	0
14 Skin pressure relief							
15 Safety awareness	0.25		0.25			0.25	
16 Medication	0.25						
17 Miscellaneous	0	0	0	0	0	0	
Total care hours	3.25	0.25	1	0.25	0.75	1.5	
Restricted care hours	2	0.5	0.75	0.5	0.75	1	2

Assumptions/rules
applied.
E.g. eating x3 per day

Total care hours	7
Restricted care hours	5.5

18 Urinary/Faecal incontinence	None None
19 Night-time intervention	1 - 2 per night Live in care
20 Constant supervision	None
21 Skilled care	hours 0
22 Domestic care	hours 4

NPCNA 2nd Carer timetable

Output displayed in the same way as for Carer 1 – care hours are normally less for carer 2 as an extra pair of hands is only required for specific Interventions e.g. transfers

Northwick Park Care Needs Assessment	
Hospital:	
Unit:	
Patient:	X, Patient
Assessment:	1. Fortnightly - 16 Jan 2017

Menu

2nd
carer

2nd carer	Morning	Mid-morning	Mid-day	Mid-afternoon	Evening	Bed-time	Night-time
1 Bed transfers							
2 Stairs							
3 Toileting: bladder							0
4 Toileting: bowels							0
5 Washing and grooming							
6 Bathing/showering							
7 Dressing							
8 Self care tasks	0	0	0	0	0	0	0
9 Meal preparation							
10 Eating							
11 Drinking							
12 Enteral feeding							
13 Feeding							
14 Skin pressure relief							
15 Safety awareness							
16 Medication							
17 Miscellaneous	0	0	0	0	0	0	
Total care hours	0	0	0	0	0	0	
Restricted care hours	0	0	0	0	0	0	0

Total care hours	0
Restricted care hours	0

18 Urinary/Faecal incontinence	None None
19 Night-time intervention	None None

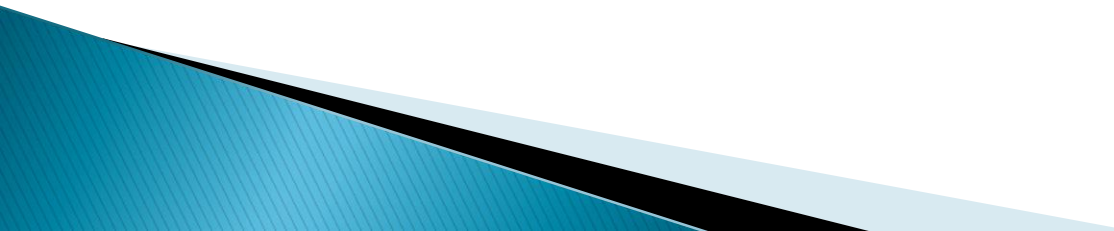
No 2nd carer required

Care Costs

1. Care costs in “look up” table were obtained from a wide range of providers
2. Total weekly care costs can be used for comparison between admission and discharge to establish cost efficiency

	Care Package Category	Description	Currency	£	
			Average cost per week (£)	Approximate range (£)	
				Min	Max
1st Carer	0	No help required	0	0	0
	Domestic	Domestic help only	36	34	40
	1	One hour daily care	66	61	72
	2	Two hours daily care	132	122	145
	3	Three hours daily care	198	183	217
	4	Four hours daily care	264	244	290
	5	Five hours daily care	330	305	362
	6	Live in carer	800	800	800
	7	Live in carer and 4 hrs cover daily	1064	1044	1090
In addition:					
I) 2nd Carer	A	2nd carer for 1-2 hours daily	132	122	145
	B	2nd carer for 3-4 hours daily	264	244	290
	C	2nd carer for 5 hours daily	330	305	362
	D	2nd live-in carer	800	800	800
II) Waking care	W	Waking night-time care	776	617	1015
			Per hour	Min	Max
III) Skilled care	S	Skilled nursing care / trained carer	23	17	35
Domestic care	DC		9	8.5	10

Care package

1. The care package is automated within the UK ROC software
 2. It is based on over 50 different computations
 3. Care packages will be extensive if incontinence occurs or if night intervention is required
 4. Changing times of medication can reduce the number of calls required per day if no other intervention is required at that time slot
- 

NPCNA Total (Summary)

Northwick Park Care Needs Assessment	
Hospital:	
Unit:	
Patient:	X, Patient
Assessment:	1. Fortnightly - 16 Jan 2017

Menu

Daily	1st carer	2nd carer	Total
Total care hours	7	0	7
Restricted care hours	5.5	0	5.5

Care hours per day

Weekly	1st carer	2nd carer	Total
Total care hours	49	0	49
Restricted care hours	38.5	0	38.5

Care hours per week

				Range (£)	
1st carer				AVERAGE COST (£)	Min Max
Daily care	Yes	7	Live in carer and 4 hrs cover daily	1064	1044 1090
Incontinence	No	0	No help required	0	0 0
Constant supervision	No	0	No help required	0	0 0
Night-time intervention	Yes	6	Live in carer	800	800 800

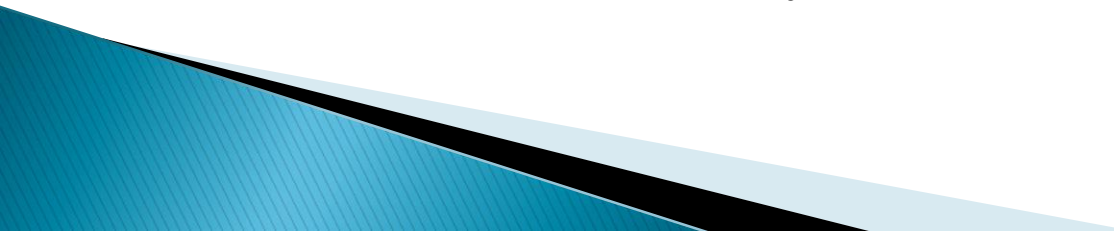
2nd carer				AVERAGE COST (£)	Min Max
Daily care	No	0		0	0 0
Incontinence	No	0		0	0 0
Night-time intervention	No	0		0	0 0

Suggested package to meet care needs

Care package				AVERAGE COST (£)	Min Max
1st carer	Yes	7	Live in carer and 4 hrs cover daily	1064	1044 1090
2nd carer	No	0		0	0 0
Waking night care	No		None	0	0 0
Skilled care	No			0	0 0
Domestic care	Yes		4 hours a week	36	34 40
Total weekly cost of care				1100	1078 1130

Average weekly care cost for suggested package of care

Ward Review

1. The preceding timetable of care and summary slides reflected the needs for one patient at one time point.
 2. The ward review table collates all the assessments for a given time period to establish total care hours and estimation of care costs.
 3. The total care hours can be used to estimate nursing staff levels.
 4. Currently if patients have had more than one assessment during the selected time period for the ward review, the last assessment only will be included in the calculations.
- 

Ward Review

Northwick Park Care Needs Assessment: Ward Review

Menu

Time period for review

Enter Date Range	from :	24/05/2014
	up to and including :	14/07/2014

Category	Light	Medium	Heavy
Enter Maximum	9	25	100

	Light <10	Medium 10-25	Heavy >25	Total
Number of patients	4	3	4	11
Basic Care Needs	9	48	135	192
Special Care Needs	5	5	30	40
NPDS	14	53	165	232

Table showing number of patients in each dependency band

1st carer	Morning	Mid-morning	Mid-day	Mid-afternoon	Evening	Bed-time	Night-time
Number of patients	11	3	9	7	9	11	3
Total care hours	32	0.75	7.25	2	6.75	18.5	
Restricted care hours	18	1.5	6	3.5	6	9.5	
2nd carer	Morning	Mid-morning	Mid-day	Mid-afternoon	Evening	Bed-time	Night-time
Number of patients	2	0	2	0	0	2	2
Total care hours	6.75	0	0.5	0	0	3.75	
Restricted care hours	4	0	1	0	0	2	
Total Person-hours	Morning	Mid-morning	Mid-day	Mid-afternoon	Evening	Bed-time	Night-time
Total care hours	38.75	0.75	7.75	2	6.75	22.25	
Restricted care hours	22	1.5	7	3.5	6	11.5	

Number of patients requiring care at different time points during the day

Total Person-hours	Daily	Weekly
Total care hours	78.25	547.75
Restricted care hours	51.5	360.5

Care hours required per day/week for this cohort

1st carer	Total	AVERAGE COST* (£)	Range* (£)	
			Min	Max
No help required	0			
Daily care package 1	1	66	61	72
Daily care package 2	1	132	122	145
Daily care package 3	0	0	0	0
Daily care package 4	1	264	244	290
Daily care package 5	0	0	0	0
Daily care package 6	4	3200	3200	3200
Daily care package 7	4	4256	4176	4360

2nd carer	Total	AVERAGE COST* (£)	Min	Max
No help required	9			
Daily care package A	0	0	0	0
Daily care package B	0	0	0	0
Daily care package C	0	0	0	0
Daily care package D	2	1600	1600	1600

Care package		AVERAGE COST* (£)	Min	Max
1st carer	11	7918	7803	8067
2nd carer	2	1600	1600	1600
Waking night care	3	2328	1851	3045
Skilled care (hours)	23	529	391	805
Domestic care (hours)	42	378	357	420

Total weekly cost of care*	12753	12002	13937
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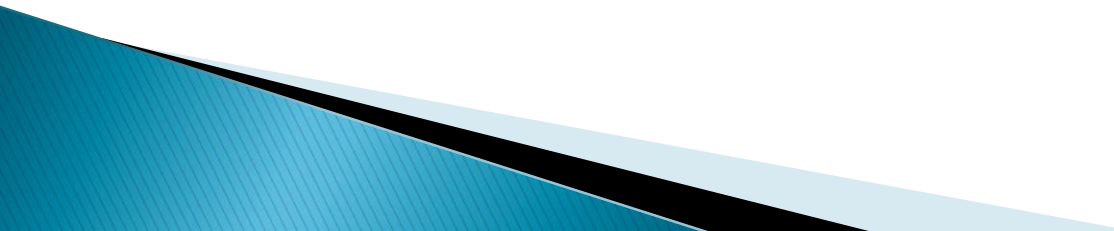
Average weekly care cost for this cohort

How to use outputs

1. Individual patient progress

- track change over time - are care hours/care costs decreasing?
- discussion during discharge planning – likely number of calls per day/care costs/care package
- Using to predict extension to stay – if discharge date is extended what are the likely changes to care hours/costs

2. Collectively

- what is the cost efficiency of the unit during a year?
 - Do nursing levels/care hours seem realistic
 - Used as one piece of information towards signposting rehabilitation unit as level 1/2
- 

This completes the NPCNA
self-complete training slides.
See Part 1 & 2 for guidance on
completing the NPDS-H tool

if you have any further questions
please email:

LNWH-tr.ukroc@nhs.net

Publications

- ▶ Lynne Turner-Stokes, Tonge P, Nyein K, et al. [The Northwick Park Dependency Score \(NPDS\): a measure of nursing dependency in rehabilitation.](#) *Clinical Rehabilitation*. 1998; Vol. 12: 304-16
- ▶ Lynne Turner-Stokes, Nyein K, Halliwell D. [The Northwick Park Care needs Assessment \(NPCNA\): a directly costable outcome measure in rehabilitation.](#) *Clinical Rehabilitation*. 1999; Vol. 13: 253-268
- ▶ Nyein K, Lynne Turner-Stokes. [Sensitivity and predictive value of the Northwick Park Care Needs Assessment \(NPCNA\) as a measure of Care Needs in the community.](#) *Clinical Rehabilitation*. 1999; Vol 13: 482-491
- ▶ Williams H, Harris R, Turner-Stokes L. [Can the Northwick Park care needs Assessment be used to estimate nursing staff requirements in an in-patient setting?](#) *Clinical Rehabilitation*. 2007; Vol 21: 535-44
- ▶ Williams H, Harris R, Turner-Stokes L. [Northwick Park care needs Assessment: adaptation for inpatient neurological setting.](#) *Journal of Advanced Nursing*. 2007; Vol 59: 612-22
- ▶ Seigert RJ, Jackson D, Tennant A, Turner-Stokes L. [Psychometric evaluation of the Northwick Park Dependency Scale \(NPDS\)](#) *Journal of Rehabilitation Medicine*. 2010. Vol. 42, 936-943