



# A Trauma Unit BPT

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## 1.1 Summary of proposed changes to the major trauma BPT for 2019/21

9. In future iterations of the national tariff we may consider introducing a Trauma Unit level 1 criterion in the BPT.



**The story to date...**

# TU themed suggestions

## National Major Trauma ODN, BPT feedback comments (Version 5 - Updated as at 12<sup>th</sup> July 2017)

Abbreviated summary list of all themes provided so far:

- COE assessment within 72hours
- Psychological support
- Rehab Prescription compliance adjustments
- TXA compliance adjustments
- Delirium screen
- Pre-hospital Identifier capture in TARN
- **BPT for TUs**
- NAI in a child measure
- Automatic bone density scan in females >65yrs
- Using NISS instead of ISS for BPT
- **Major trauma managed in TUs**
- BOAST 4 incorporated into BPT
- 4hr time to admission target
- 2 week follow ups for MTC patients
- BPT for Major Trauma Wards in MTCs.
- **Increasing TU TARN compliance**
- **48hr repatriation From MTC to TU target**
- **TU rehab prescription target**

# The impact of the FNOF & MTC BPTs

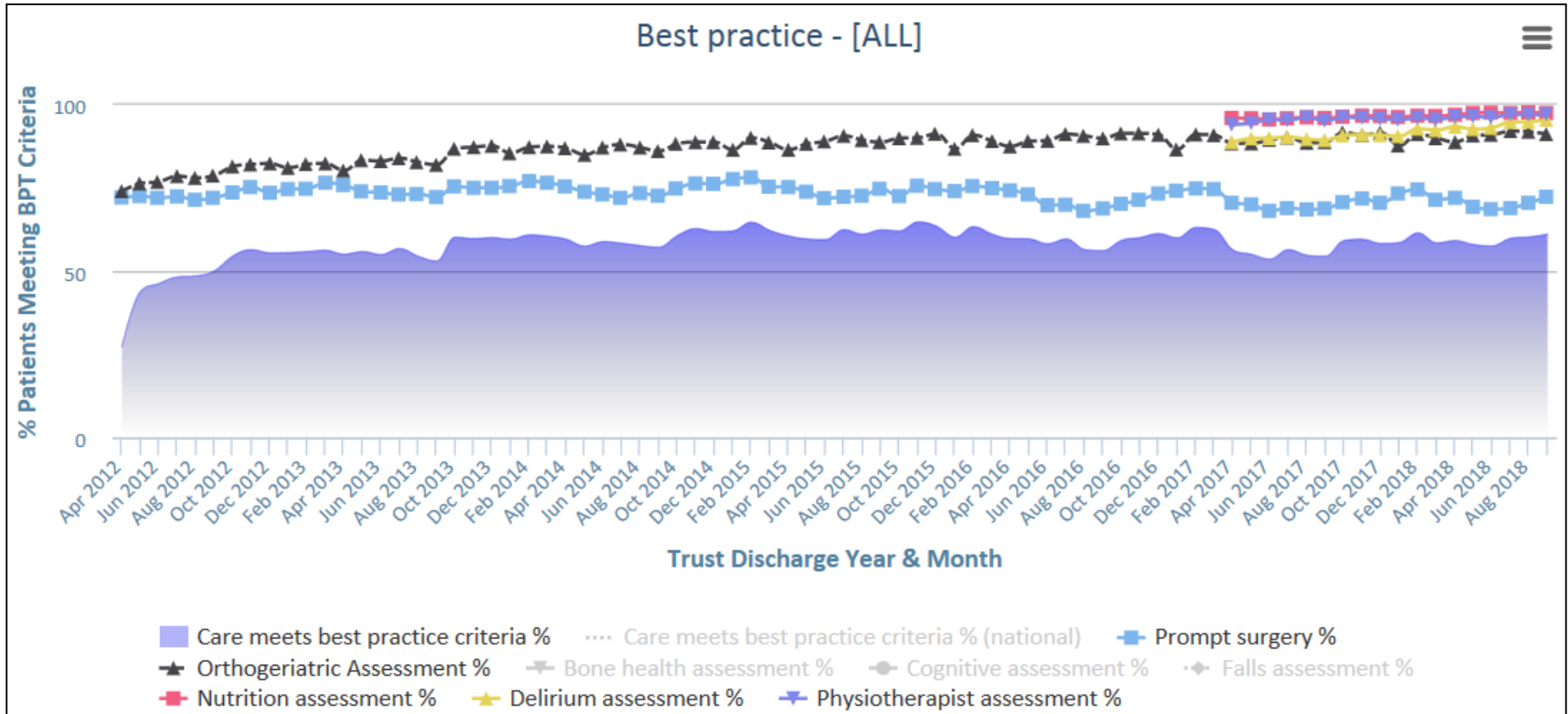


FFFAP

NHFD - Charts & Reports

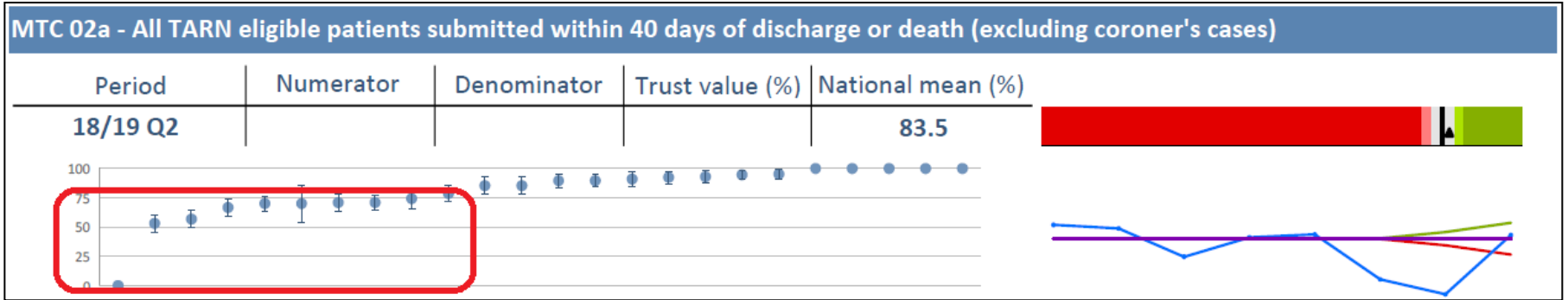
Part of the Falls and Fragility Fracture Audit Programme

Home | Charts | Benchmarks | Dashboards



# MTC BPT impact...

MTCs:



**The theory...**

# TU dashboards...

## Trauma Unit Dashboard

Developed by a working group of clinicians from Trauma Units  
Prepared by the Trauma Audit & Research Network 14/07/2017

### Data Quality

#### TU 01 - Quality of patient data submitted to TARN

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	43.2	45	96.1	94.6



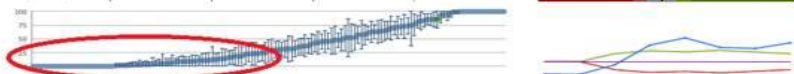
#### TU 02a - All TARN eligible patients submitted

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	45	42	100+	90.6



#### TU 02b - All TARN eligible patients submitted within 40 days of discharge or death (excluding coroner's cases)

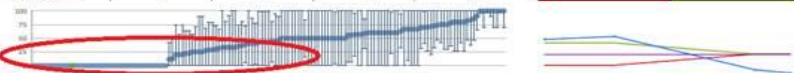
Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	36	42	85.9	48



### Evidence Based Measures

#### TU 03 - Proportion of patients meeting NICE head injury guidelines that receive CT scan within 60 minutes of arrival at TU

Rolling	Numerator	Denominator	Trust value (%)	National mean (%)
Rolling year	0	2	0	51



#### TU 04 - TUs administer Tranexamic Acid within 3 hours of incident to patients that receive blood products within 6 hours of incident

Rolling	Numerator	Denominator	Trust value (%)	National mean (%)
Rolling year	0	1	0	60.1



#### TU 05a - TUs deliver Consultant led trauma teams within 30 minutes for triage positive ISS > 15 patients

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	2	3	66.7	44



#### TU 05b - TUs deliver Consultant led trauma teams within 30 minutes for patients with an Injury Severity Score greater than 15

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	4	14	28.6	16.9



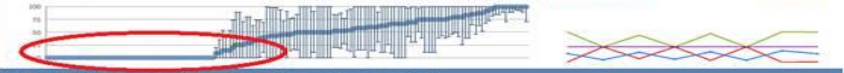
#### TU 06a - TUs deliver grade STR 3 or above led trauma teams on arrival for triage positive patients

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	1	4	25	54.6



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Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	1	4	25	54.6



#### TU 06b - TUs deliver grade STR 3 or above led trauma teams on arrival

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	2	39	5.1	14.9



#### TU 07a - Rapid access to specialist MTC care - patients transferred to MTC within 12 hours of referral request

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	4	5	80	67.1



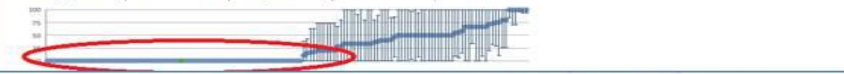
#### TU 07b - Rapid access to specialist MTC care - patients transferred to MTC within 2 days of referral request

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	4	5	80	82.9



#### TU 08 - Proportion of patients with GCS <9 with definitive airway management within 30 minutes of arrival in ED

Rolling	Numerator	Denominator	Trust value (%)	National mean (%)
Rolling year	No patients	No patients	0	38.1



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Rolling	Numerator	Denominator	Trust value (%)	National mean (%)
Rolling year	No patients	No patients	0	38.1



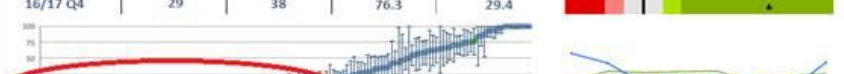
#### TU 09 - Proportion of directly admitted patients receiving CT scan within 60 minutes of arrival at TU

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	3	20	15	23.8



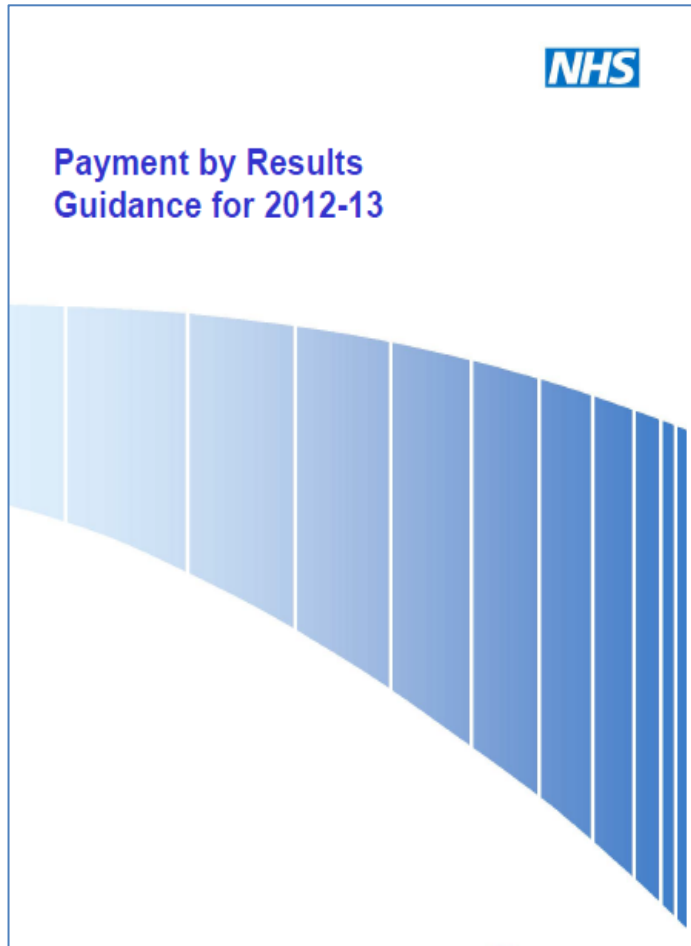
#### TU 10 - Proportion of patients with an ISS of more than 8 that have a rehabilitation prescription completed

Period	Numerator	Denominator	Trust value (%)	National mean (%)
16/17 Q4	29	38	76.3	29.4

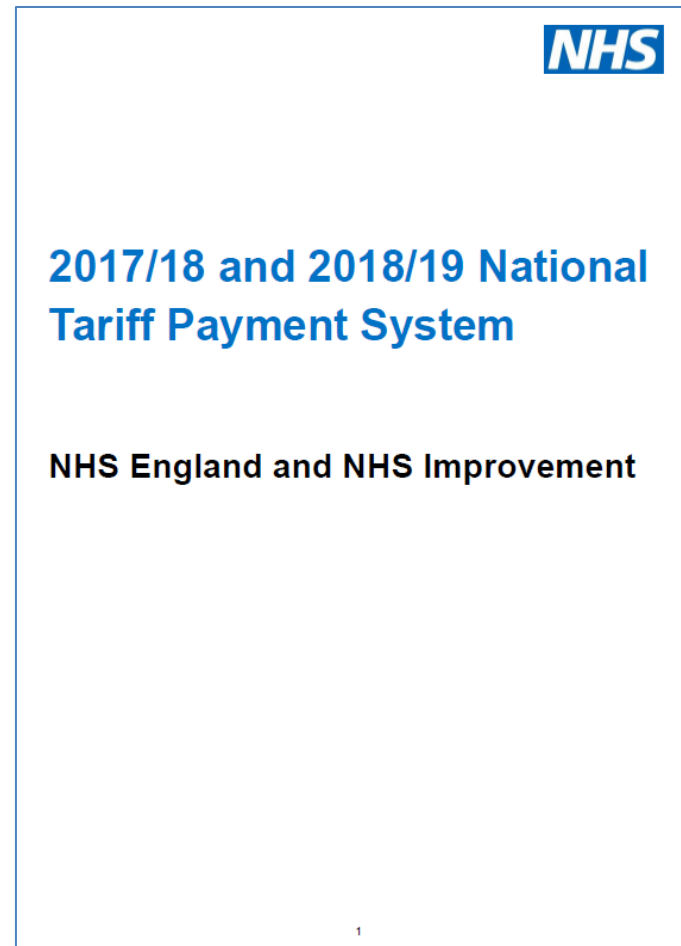




# Draft proposal



<https://www.gov.uk/government/publications/confirmation-of-payment-by-results-pbr-arrangements-for-2012-13>



<https://improvement.nhs.uk/resources/national-tariff-1719/>

# Draft proposal

## Major Trauma in Trauma Units

77 Gateway reference: 17250

### PBR Operational guidance

341. We are replicating a Best Practice Tariff (BPT) (illustrated in Annex A Figure 4i) for the care of trauma patients treated in Designated Trauma Units (TUs). The aim is to encourage best practice treatment and management of trauma patients throughout the patient's pathway across regional trauma networks. The BPT is paid on activity TUs for the most seriously injured trauma patients. This update to the BPT tariff is to further support the enhanced trauma care element for intermediate and major trauma pathways, also provided by TUs.

342. The BPT is not conditional upon the patient's HRG being in the VA chapter (multiple injuries). The BPT is made up of one level of payment identified by the Injury Severity Score (ISS)<sup>16</sup> of the patient and conditional on achieving the criteria below. The BPT for levels 1 are available in the tariff information spreadsheet. The BPT applies to adults and children.

343. Level 1 is payable for all patients with an ISS of 9 to 15 providing that the following criteria are met:

- (a) the patient is treated in a Designated Trauma Unit
- (b) Trauma Audit and Research Network (TARN) minimum data set is completed and submitted within 40 days of discharge from TUs
- (c) a rehabilitation prescription is completed by the treating therapist, accessible for each patient applicable and indicated so on TARN (See TARN site for applicable patient definition)
- (d) any coroners' cases are flagged within TARN as being subject to delay to allow later payment.
- (e) tranexamic acid is administered within three hours of injury for patients receiving blood products
- (f) if the patient is transferred out as a non-emergency they must be admitted to the major trauma centre within two calendar days of referral from the trauma unit.
- (g) all trauma patients aged 65 years and older should have a comprehensive geriatric assessment documented within 72 hours of admission (Grade ST3 or above)
- (h) for trauma patients fit for repatriation, TUs must offer MTCs a bed within 48 hours of written notification. The patient must be admitted back to the TU within the 48 hour window.

344. Removed as not applicable for Trauma Units.

345. The BPT will not be applied by SUS PBR and organisations will need to use the TARN database to support the payment. The reporting process for payment is set out in Annex D. Reports will be available from TARN from April 2019 and TUs and Commissioning Groups will be able to produce reports for patient activity.

346. Where contractual arrangements are already in place for 2019-20, commissioners may monitor the best practice tariff in shadow form. The criteria used to support payment in this situation must be higher than those outlined in paragraphs 343 and 344 above.

347. The now well established trauma networks have previously given MTCs and TUs a small rise in emergency admissions and may continue to do so. Any patients eligible for the major trauma BPT Level 1 should be excluded from the 30% marginal rate emergency admissions threshold. This should be agreed by provider's local commissioners. The establishment and continued maturation of TUs represents a service redesign as set out in paragraphs 691 to 693.

348. Within the criteria to attract the BPT for major trauma is that every patient with an ISS of more than 8 has a rehabilitation prescription. The core components of the rehabilitation prescription will be recorded as part of the TARN minimum data set return.

## Policy guidance

349. International evidence shows that regional trauma networks save resources by reductions in length of stay (LoS) due to prompt transfers and reduced Intensive Care Unit bed stays, shorter rehabilitation, fewer treatment complications and better quality care.

350. An independent review by Scharr, University of Sheffield, February 2011, has confirmed the cost effectiveness of trauma networks with networks proving to be cost effective at the threshold of £20,000 per Quality Adjusted Life Year (QALY). This was achieved on reductions in death and disability alone and did not factor in the additional benefit from the reduction in LoS that is expected in the NHS in England.

351. The enhanced specifications include immediate consultant input, immediate access to imaging and surgery, combined multispecialty input and planning of complex rehabilitation.

352. The major trauma BPT uses the Injury Severity Score (ISS), an established medical score to assess trauma severity to calculate the two levels for the best practice tariff.

353. A patient cannot attract both additional payments for Level 1 and 2 within the same organisation.

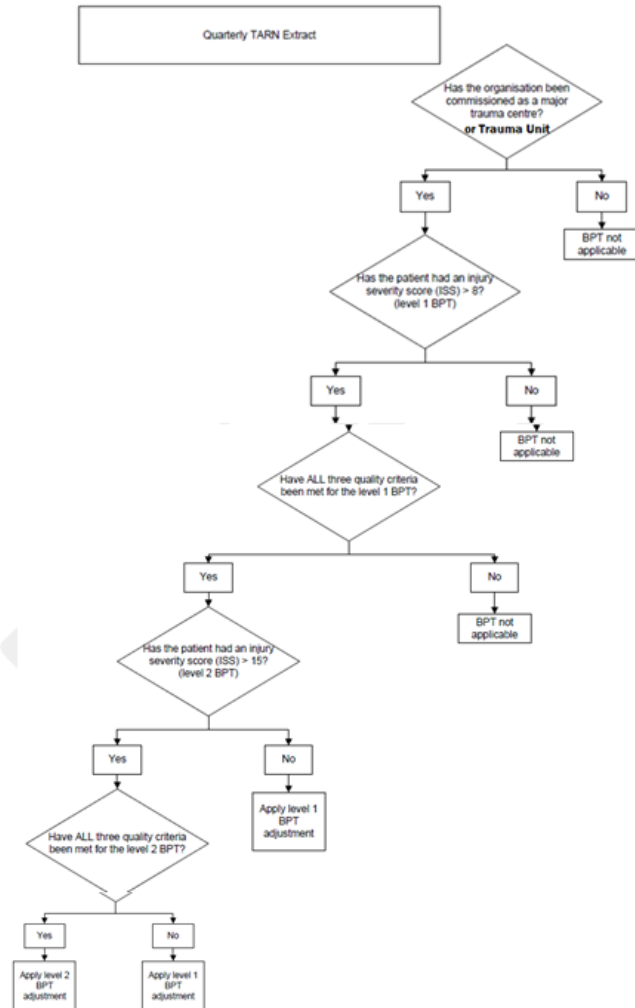
354. The major trauma BPT will attract any relevant specialised services top-up provided the spell and provider are eligible.

355. removed as not applicable

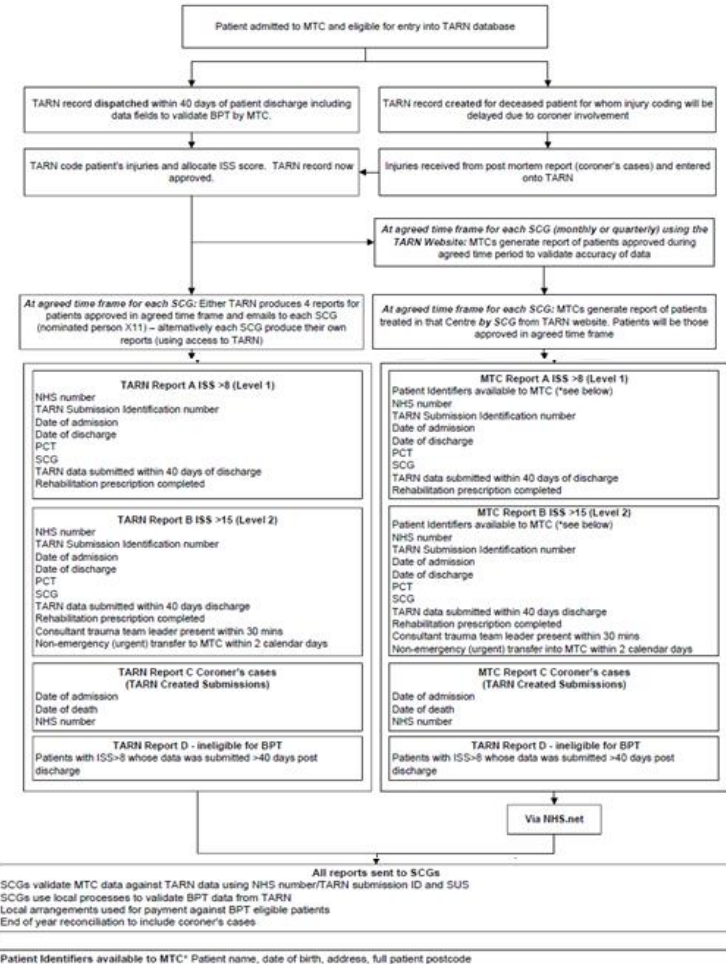
356. Commissioners will want to monitor emergency admissions in trauma units.

# Draft proposal

Annex A Figure 4j: Major trauma best practice tariff



Annex D: flow of information to enable validation of major trauma best practice



# Network Modelling



Fig 1 (Actual BPT)	Real data for period Jan - Dec 2016			Real data for period Apr - Dec 2016				Actual billed for 2016	
Trauma Network	Predicted TARN activity 2015/16	Actual TARN entry 2016/17	TARN compliance %	ISS 9 - 15 n	%	ISS >15 n	%	Total level 1 payment (£1,477 +MFF24%)	Total level 2 payment (£2,777 +MFF24%)
Major Trauma Centre	1000	1062	100+	400	38.1%	526	50.0	£821,627	£1,868,924
Trauma Unit 1	300	156	43.1 - 52	54	34.0%	37	23.3	£0	£0
Trauma Unit 2	262	141	44.8 - 54	88	50.9%	50	28.9	£0	£0
Trauma Unit 3	160	59	30.9 - 37.3	48	56.5%	18	21.2	£0	£0
Trauma Unit 4	160	118	61.5 - 74.1	81	54.7%	33	22.3	£0	£0
Trauma Unit 5	156	68	36.2 - 43.6	20	41.7%	17	35.4	£0	£0
Trauma Unit 6	120	120	87.6 - 100+	50	41.3%	42	34.7	£0	£0
<b>Totals:</b>	<b>2158</b>	<b>1724</b>	<b>70%</b>	<b>741</b>	<b>45.4%</b>	<b>723</b>	<b>35.4%</b>	<b>£821,627</b>	<b>£1,868,924</b>

Fig 2 (New BPT applied)	Real data for period Jan - Dec 2016			Real data for period Apr - Dec 2016				Modelled on actual 2016, 9 month activity	
Trauma Network	Predicted TARN activity 2015/16	Actual TARN entry 2016/17	TARN compliance %	ISS 9 - 15 n	%	ISS >15 n	%	Total level 1 payment (£1,477 +MFF20%)	Total level 2 payment (£2,777 +MFF24%)
Major Trauma Centre	1000	1062	100+	400	38.1%	526	50.0	£708,960	£1,811,270
Trauma Unit 1	300	156	43.1 - 52	54	34.0%	37	23.3	£95,710	£0
Trauma Unit 2	262	141	44.8 - 54	88	50.9%	50	28.9	£155,971	£0
Trauma Unit 3	160	59	30.9 - 37.3	48	56.5%	18	21.2	£85,075	£0
Trauma Unit 4	160	118	61.5 - 74.1	81	54.7%	33	22.3	£143,564	£0
Trauma Unit 5	156	68	36.2 - 43.6	20	41.7%	17	35.4	£35,448	£0
Trauma Unit 6	120	120	87.6 - 100+	50	41.3%	42	34.7	£88,620	£0
<b>Total:</b>	<b>2158</b>	<b>1724</b>	<b>70%</b>		<b>45.4%</b>		<b>35.4%</b>	<b>£1,313,348</b>	<b>£1,811,270</b>

# Network Modelling

Fig 3 (Maximum BPT)	Baseline data for 1 year period 2019/20			Predicted data for 1 year period				Based on 100% annual TARN compliance	
Trauma Network	Predicted TARN activity 2019/20 (10% growth)	Predicted TARN entry at 100%	TARN compliance %	ISS 9 - 15 n	%	ISS >15 n	%	Total level 1 payment (£1,477 +MFF20%)	Total level 2 payment (£2,777 +MFF24%)
Major Trauma Centre	1100	1100	100+	419	38.1%	550	50.0%	£742,813	£1,893,914
Trauma Unit 1	330	330	100+	150	45.4%	117	35.4%	£265,541	£0
Trauma Unit 2	288	288	100+	131	45.4%	102	35.4%	£231,906	£0
Trauma Unit 3	176	176	100+	80	45.4%	62	35.4%	£141,622	£0
Trauma Unit 4	176	176	100+	80	45.4%	88	35.4%	£141,622	£0
Trauma Unit 5	172	172	100+	78	45.4%	61	35.4%	£138,081	£0
Trauma Unit 6	132	132	100+	60	45.4%	47	35.4%	£106,216	£0
<b>Total:</b>	<b>2374</b>	<b>2374</b>	<b>100%</b>					<b>£1,767,801</b>	<b>£1,893,914</b>

# Up scaled nationally

	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>BPT Criteria 1 performance</b>											
2	2017 English non-MTCs											
3	*Transfer measure is as per MTCs (i.e. based on transfers in within 2 days of referral request)											
4	** failed more than 1 criteria											
5	<b>Current compliance</b>											
6		<b>Level 1</b>	<b>Possible level 1</b>				<b>Total</b>	<b>Potential cap</b>		<b>Max incentive</b>		
7	Site		Fail RP	Fail TXA	Fail trans*	Fail multi**						
8	Total (n)	11598	16404	40	231	355	28628			Room for improvement		
9	Total (%)	40.5%	57.3%	0.1%	0.8%	1.2%	total			£		
10	TU 1	60	438		1	7	506	£300,000	446	£653,390		
11	TU 2	58	401		1	17	477	£300,000	419	£613,835		
12	TU 3	145	312		1	5	463	£300,000	318	£465,870		
13	TU 4	80	349	1		6	436	£300,000	356	£521,540		
14	TU 5	99	330		1	5	435	£300,000	336	£492,240		
15	TU 6	322	76		6	1	405	£300,000	83	£121,595		
16	TU 7	23	364			16	403	£300,000	380	£556,700		
17	TU 8	49	350			4	403	£300,000	354	£518,610		
18	TU 9	56	343			3	402	£300,000	346	£506,890		
19	TU 10	134	255	1	5	5	400	£300,000	266	£389,690		
20	TU 11	89	285	1	2	8	385	£300,000	296	£433,640		
21	TU 12	63	316			1	380	£300,000	317	£464,405		
22	TU 13	306	42	2	17	1	368	£300,000	62	£90,830		
23	TU 14	185	152		4	2	343	£300,000	158	£231,470		
24	TU 15	114	223	1	1	3	342	£300,000	228	£334,020		
25	TU 16	42	294			1	337	£300,000	295	£432,175		

# Up scaled nationally

	A	B	C	D	E	F	G	H	I	J	K	L
59	TU 50	222	11	1	3		237		£300,000		15	£21,975
60	TU 51	28	196		2	7	233		£300,000		205	£300,325
61	TU 52	37	191		3		231		£300,000		194	£284,210
62	TU 53	26	204				230		£300,000		204	£298,860
63	TU 54	9	213			7	229		£300,000		220	£322,300
64	TU 55	38	188				226		£300,000		188	£275,420
65	TU 56	12	202	1		4	219		£300,000		207	£303,255
66	TU 57	33	178			8	219		£300,000		186	£272,490
67	TU 58	22	189	1		4	216		£300,000		194	£284,210
68	TU 59	163	48		3		214		£300,000		51	£74,715
69	TU 60	36	170			4	210		£300,000		174	£254,910
70	TU 61	91	110		9		210		£300,000		119	£174,335
71	TU 62	77	132	<b>Potential cap threshold</b>			209		£300,000		132	£193,380
72	TU 63	107	91		7	4	209		£300,000		102	£149,430
73	TU 64	60	132	2	4	3	201		£294,465		141	£206,565
74	TU 65	94	98		4	3	199		£291,535		105	£153,825
75	TU 66	186	10		1		197		£288,605		11	£16,115
76	TU 67	22	174				196		£287,140		174	£254,910
77	TU 68	45	147	1	1	1	195		£285,675		150	£219,750
78	TU 69	126	59		4	1	190		£278,350		64	£93,760
79	TU 70	180	7	2			189		£276,885		9	£13,185
80	TU 71	178	6	1	2	1	188		£275,420		10	£14,650
81	TU 72	10	171			6	187		£273,955		177	£259,305
82	TU 73	166	15		4		185		£271,025		19	£27,835
83	TU 74	21	161			2	184		£269,560		163	£238,795

# Up scaled nationally

	A	B	C	D	E	F	G	H	I	J	K	L	
109	TU 100	40	88		2	9	139		£203,635		99	£145,035	
110	TU 101	124	11		4		139		£203,635		15	£21,975	
111	TU 102	19	108		2	9	138		£202,170		119	£174,335	
112	TU 103	111	19	1	4	2	137		£200,705		26	£38,090	
113	TU 104	135	<b>Total number of QST designated Trauma Units</b>					135		£197,775		0	£0
114	TU 105	22	105			5	132		£193,380		110	£161,150	
115	TU 106	9	116			6	131		£191,915		122	£178,730	
116	TU 107	63	67			1	131		£191,915		68	£99,620	
117	TU 108	115	11		2	1	129		£188,985		14	£20,510	
118	TU 109	8	117			3	128		£187,520		120	£175,800	
119	TU 110	71	52			5	128		£187,520		57	£83,505	
120	TU 111	77	44	1	1	1	124		£181,660		47	£68,855	
121	TU 112	9	114				123		£180,195		114	£167,010	
122	TU 113	117	3		1		121		£177,265		4	£5,860	
123	TU 114	10	101			1	112		£164,080		102	£149,430	
124	TU 115	21	85	<b>Potential minimum threshold</b>			106		£155,290		85	£124,525	
125	TU 116	78	24				102		£149,430		24	£35,160	
126	TU 117	31	64				95		£139,175		64	£93,760	
127	TU 118	55	33			2	90		£131,850		35	£51,275	
128	TU 119	87	1		1		89		£130,385		2	£2,930	
129	TU 120	21	65				86		£125,990		65	£95,225	
130	TU 121	12	61		1	11	85		£124,525		73	£106,945	
131	TU 122	5	76			1	82		£120,130		77	£112,805	
132	TU 123	8	74				82		£120,130		74	£108,410	
133	TU 124	26	53				79		£115,735		53	£77,645	



# Up scaled nationally

	A	B	C	D	E	F	G	H	I	J	K	L
34	TU 125	64	14			1	79		£115,735		15	£21,975
35	TU 126	7	67				74		£108,410		67	£98,155
36	TU 127	51	18				69		£101,085		18	£26,370
37	TU 128	12	56				68		£99,620		56	£82,040
38	TU 129	51	15				66		£96,690		15	£21,975
39	TU 130	5	59				64		£93,760		59	£86,435
40	TU 131	38	25				63		£92,295		25	£36,625
41	TU 132	34	23	1		3	61		£89,365		27	£39,555
42	TU 133	13	39				52		£76,180		39	£57,135
43	TU 134	14	30				44		£64,460		30	£43,950
44	TU 135	1	38			1	40		£58,600		39	£57,135
45	TU 136	13	19			1	33		£48,345		20	£29,300
46	TU 137	18	14				32		£46,880		14	£20,510
47	TU 138	9	13		1	7	30		£43,950		21	£30,765
48	TU 139	2	15				17		£24,905		15	£21,975
49	TU 140	17					17		£24,905		0	£0
50	TU 141	4					4		£5,860		0	£0
51	TU 142	1	1				2		£2,930		1	£1,465
52	totals	11598	16404	40	231	355	28628		£33,267,255			
53	totals	£16,991,070	£24,031,860	£58,600	£338,415	£520,075	£41,940,020					



**Current  
performance £**

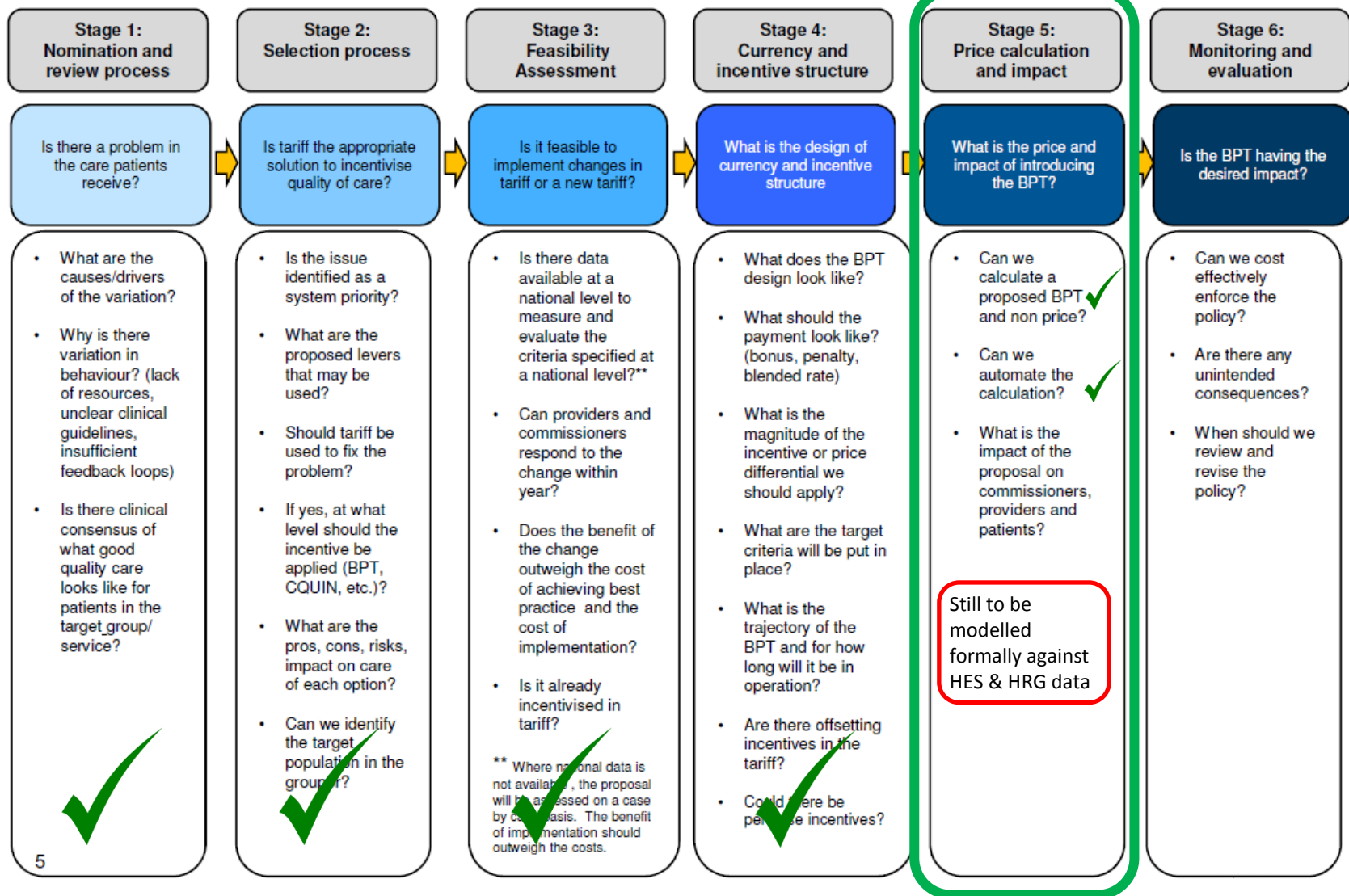
**Max 84%  
performance £**

**Max with cap  
(adjustable)**

**Total number of 'non-MTCs in TARN'.**

**The position right now**

# Summary of the policy appraisal framework – s118



**When in the future ?**

**Aiming for go live: 1<sup>st</sup> April 2020/21**



# A Trauma Unit BPT

## Joseph Davies BSc

NWL Major Trauma Network Manager, Imperial College Healthcare NHS Trust  
National Co-Chair - Major Trauma Operational Delivery Networks Group

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