

Maximising Sport Science In League One

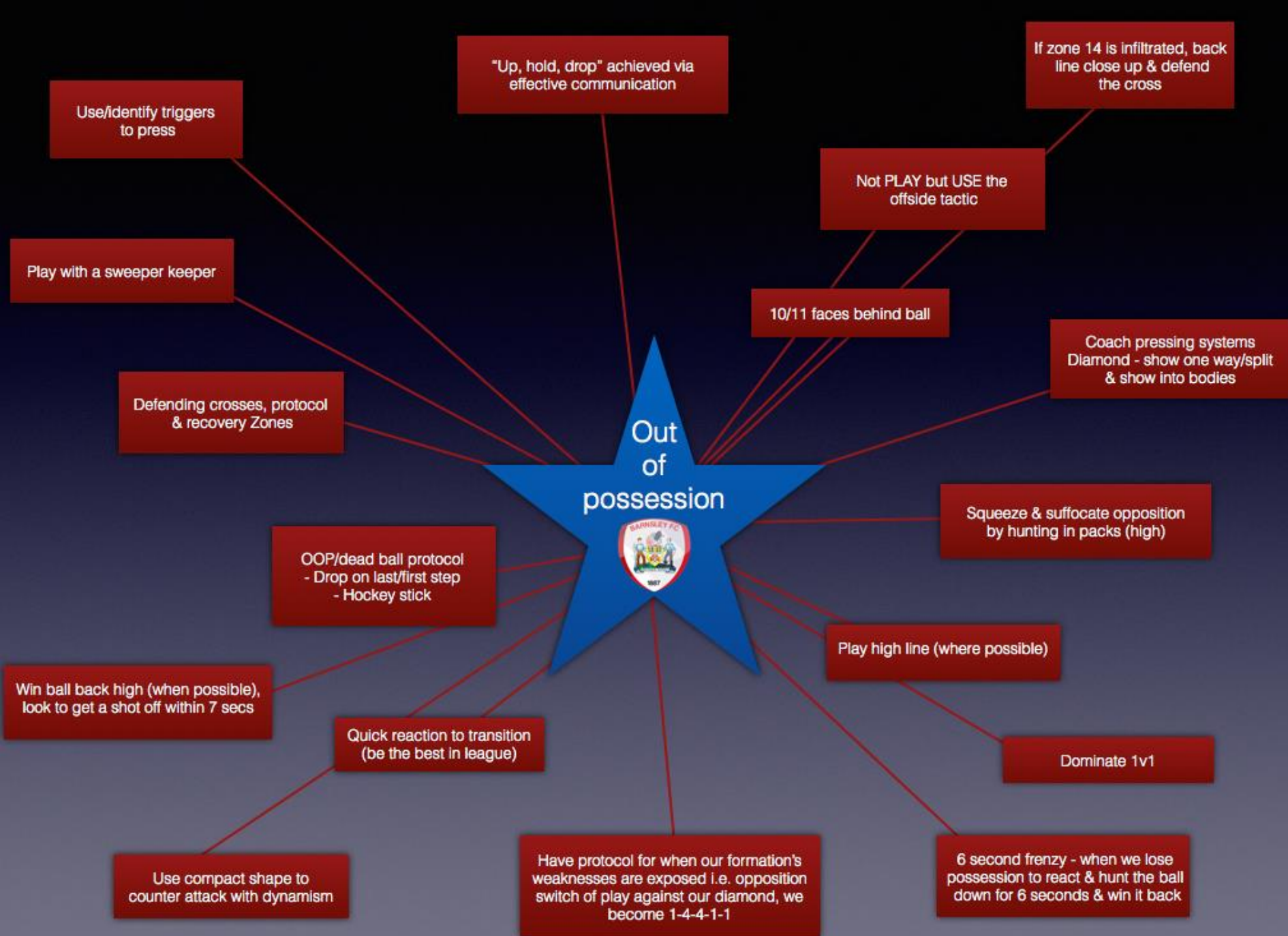


Lee Johnson – Head Coach
Nathan Winder – Head of Sport Science

Playing Philosophy

A Barnsley team will dominate possession and control the game by effective distribution from the back and bursting quickly through the thirds with pace on the flanks and through the middle. We will play with a keeper/sweeper and an organised and mobile high defensive line. Our defenders will support the quick counter by bringing the ball out through defined exit routes to allow our midfield to get up with and beyond the strikers to create attacking overloads. Out of possession we will adopt suffocating pressing systems based on identifying triggers and hunting in packs to recover the ball high up the field within 6 seconds of its loss. We will react quickly to this transition and create and take the earliest opportunity to shoot on goal.

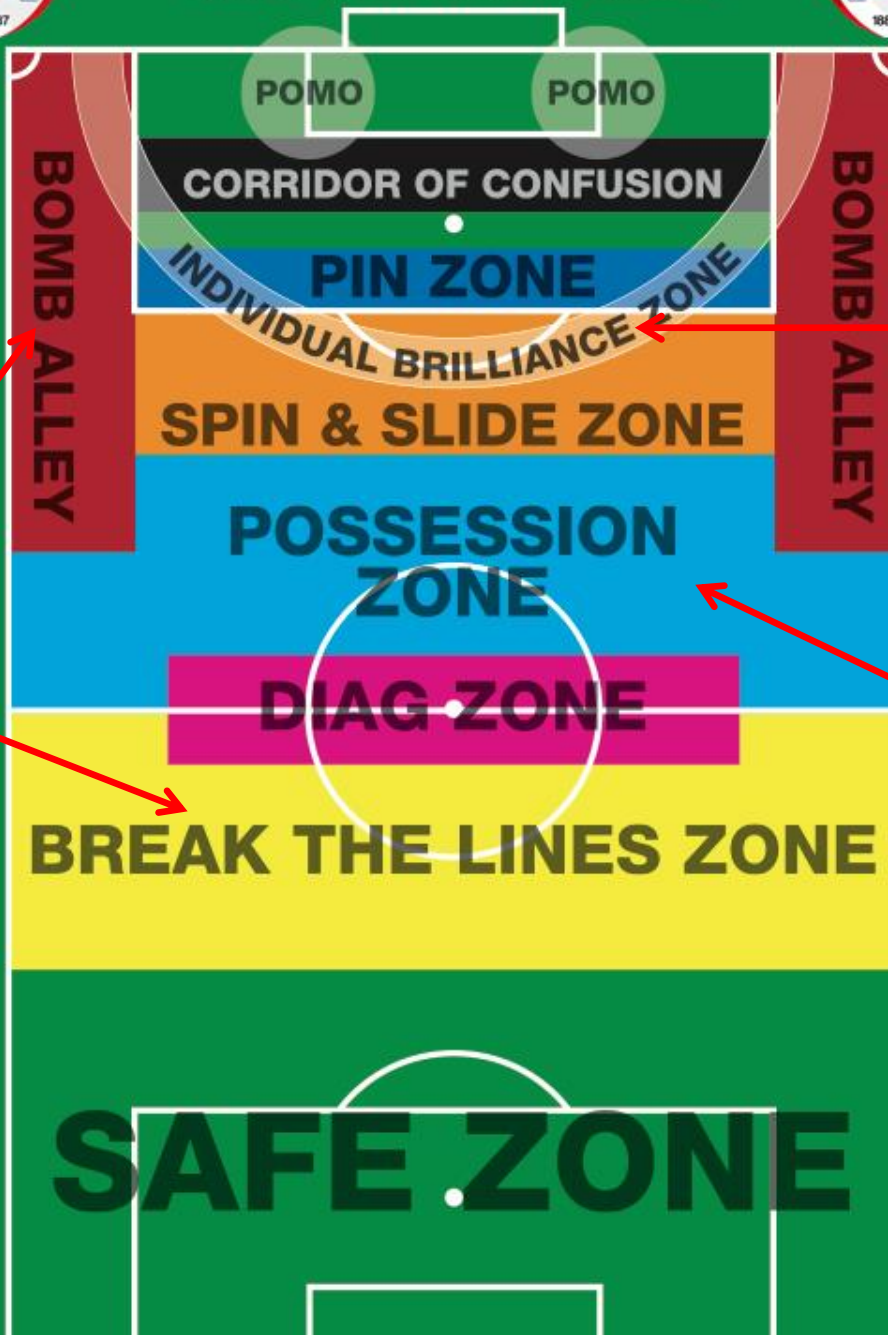






OUR GAME

AREAS OF THE PITCH WHEN IN POSSESSION



Working Science into a Philosophy

Aim:

To link the wellbeing and physical development of each player into a playing philosophy that includes:

- ✓ *Intensity*
- ✓ *Reaction Time*
- ✓ *Transition*
- ✓ *Concentration*
- ✓ *Recovery*



Practiced by:

- ✓ *Short sessions (Mean 65 ± 16 minutes)*
- ✓ *Quick changes between games and rules*
- ✓ *Continuous short recovery breaks*

Monitored by:

- ✓ *Live HR Coding- Physiological (Objective)*
- ✓ *Session-RPE – Physiological/Psychological (Subjective)*

Before.....

Wellness Data								
Daily Report - Monday 02/03/15								
Name	Sleep	Fatigue	Mood	Muscle Soreness	Total	Water [L]	mOsmols /kgH ₂ O	Mass [kg]
	2	4	3	4	13	1	450	94
	1	3	3	4	9	0.5	730	99
					0			
	3	2	3	2	10	1	320	76.8
	2	3	3	3	11	0.35	320	88.1
	3	3	2	3	11	1	20	82.1
	1	4	2	4	11	0	180	77.6
	2	3	2	4	11	1	640	101
	2	4	2	4	12	1	180	88.7
	2	3	3	3	9	1.5	730	78.1
	2	2	4	2	10	1	80	79.5
	3	4	4	3	14	0.5	490	79.5
	2	2	2	2	8	1	490	76.4
	2	2	3	2	9	1	320	75.2
	2	2	3	2	9	0	420	
	2	4	2	4	12	0.75	170	77.1
	1	2	2	4	9	0.5	60	81.5
	2	4	2	4	12	1	600	74
	2	2	2	2	8	0.5	380	67
	2	2	1	3	8	2	620	83.7
	3	3	3	4	13	1	500	81.8
	2	4	5	2	13	1.5	620	85.7
	3	2	3	2	10	0.5	500	82.7
	2	3	3	2	10	0.5	460	76
	2	4	3	4	13	1.5	170	67.5
	2	2	4	2	10	0.5	230	82
	2	4	2	5	13	0.5	290	70
	1	3	4	3	11	1.5	400	90.7
	3	3	3	4	13	1	550	84.2
AVERAGE	2.1	3.0	2.6	3.1	10.3	0.9	390	81.46

- ✓ Wellness data (1)
- ✓ Urine sample – 4.2% dehydration effects HR data by 7.4% (2)
- ✓ Meeting on training
- ✓ Work around the physical exposure to be completed in the technical and tactical session and meet the demands of the game (3,4,5)
- ✓ i.e. Supplement training with hamstring conditioning – extensive sprints (5)
- ✓ Or explosive repeated actions (6,7)

During...

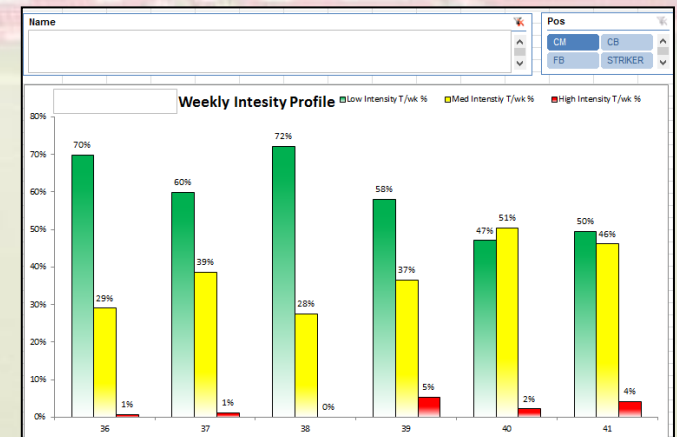
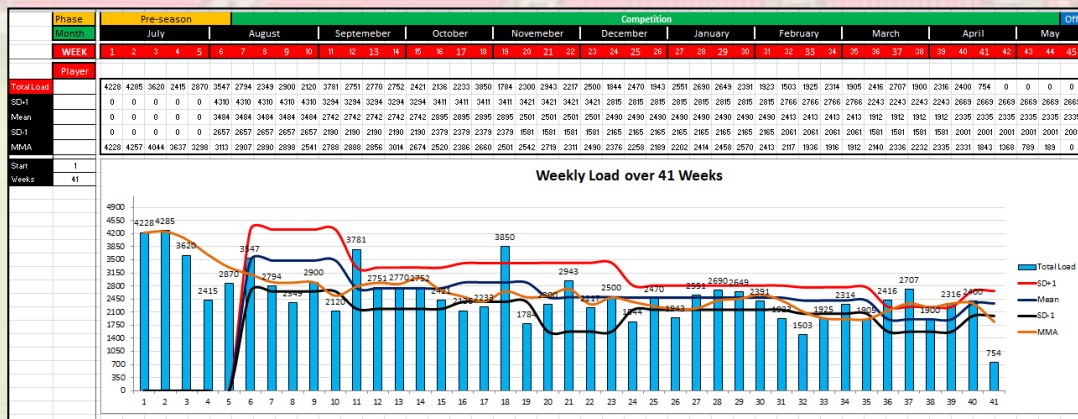
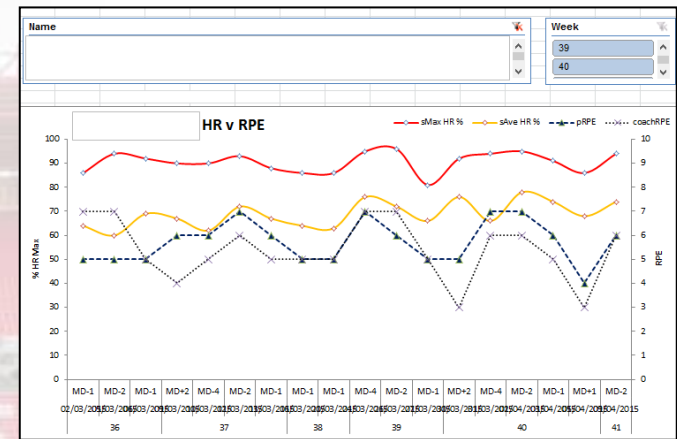
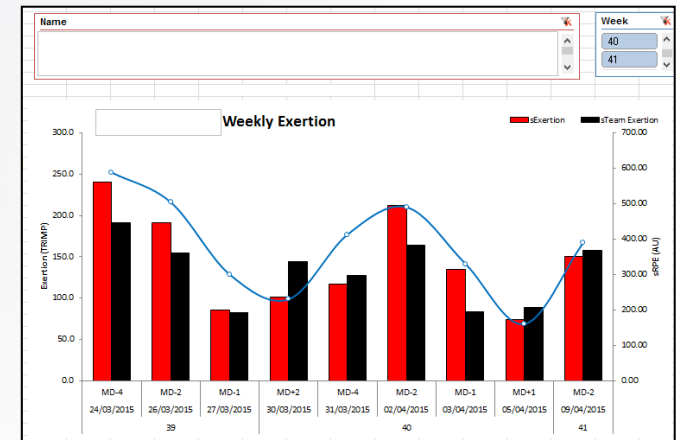
- ✓ Live monitoring
- ✓ When is enough, enough?
- ✓ Interlink extra physical needs with technical/tactical needs and specific positional demands. Stimulating for player and easier adherence
- ✓ Maximising resources in a top league one club within the financial constraints means being able to draw on skills such as;
 - A. Knowing your players
 - B. Using soft skills
 - C. Experience and knowledge of players previous week(s)



After...

Reports generated to/in excel to plot:

- ✓ Exertion and Team Exertion vs sRPE (AU) (8)
- ✓ Individual Max HR vs Average HR vs Player RPE vs Coach RPE (9,10)
- ✓ Weekly Intensity (11)
- ✓ RPE System for cumulative load (12,13)




'Simple Monitoring, Effective Monitoring'

TOP 10 TIPS
For Training Monitoring in Team Sports
Designed by @YMLSportScience
By J. Bilsborough, C. Sullivan, T. Kempton, T. Lovell, M. Ciancosi, J. Hocking & A.J. Coutts

1 Give fast feedbacks to players
Compliance is hugely important. Keep players informed for increased compliance

2 Do the BASICS right before introducing more advanced monitoring responses


3 Show players the sRPE scale post training
Put it in their face to ensure they are rating the session based on the actual sRPE scale and not the scale that is in their head



4 Show players how monitoring can help their own performance
They are selfish, if they can see how it will help them they will buy it

5 Player "buy in" - team sport athletes are competitive creatures. However, if comparing players/groups make sure comparisons are based on all aspects of performance and not just one e.g. GPS
Show them what they are good at!

6 Make sure players know why you are collecting the data
If they know the purpose they are likely to complain less about it




7 Create a consistent routine so the players know what is expected of them each day
They are creatures of habit, so set the standard and remain consistent

8 Make sure senior players and coaches support the monitoring system and enforce

9 Ask the players independently and be sure you don't let them escape training captivity before you ask them to rate sRPE

10 Report few variables, but database many



- ✓ Show the player and feedback
- ✓ Player 'buy in' for the right reasons
- ✓ 'Buy in' created by support of coaches
- ✓ Consistent routine, creatures of habit
- ✓ Record as much as you can, report what you need to be effective

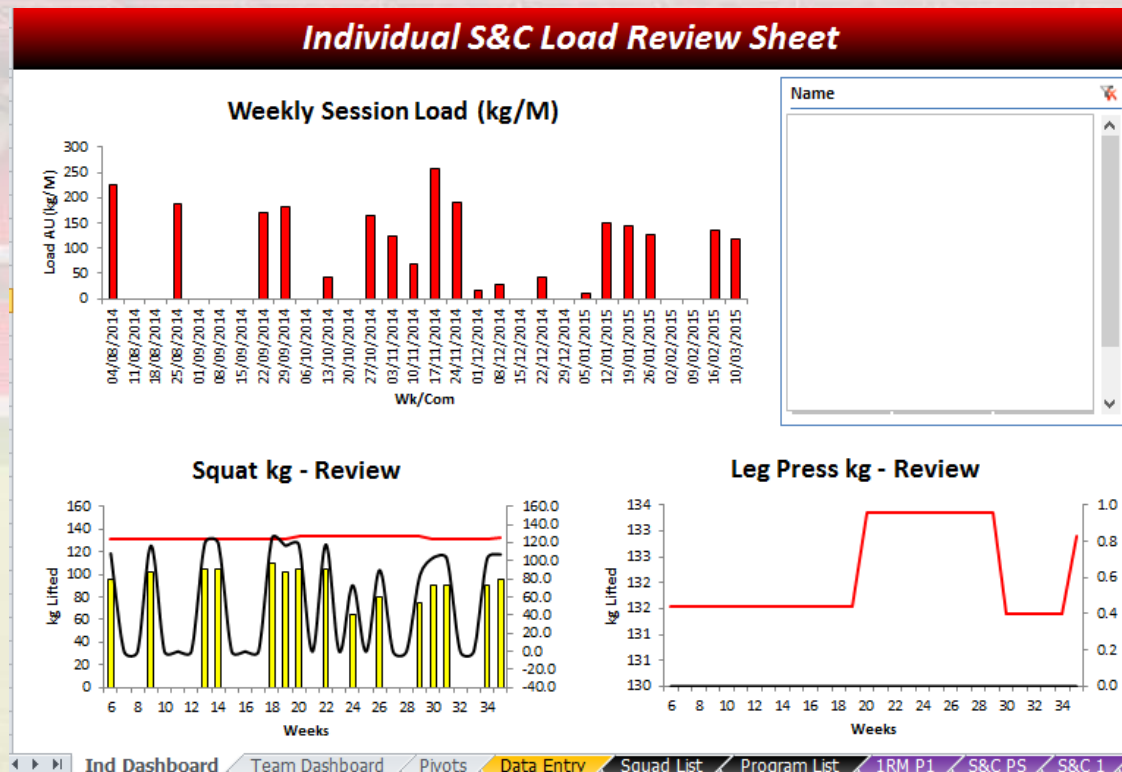
Performance



Injuries

Supplementing Physical Demands

- ✓ Strength Tuesdays (14,15)
- ✓ Power Thursdays (14,15)
- ✓ Every training day performance enhancement, develop a robust athlete.



Injury Rates

- 46% reduction from last season on days lost through injury (up to current day and not including illnesses)
- Overview of injury audit



Barnsley Fc Injury audit season 2014-2015			Total availability				
Player No	Position	Name	Total Days	Days Miss	Days available	% Available	Total Injuries
1	GK		199	61	138	68%	2
2	GK		218	9	209	95%	1
3	DEF		134	0	134	100%	0
4	MID		218	43	175	77%	1
5	DEF		218	25	193	89%	2
6	DEF		218	21	197	84%	2
7	MID		218	21	197	91%	2
8	MID		218	0	218	100%	0
9	MID		193	0	193	100%	0
10	ATT		26	0	26	100%	0
11	ATT		218	25	193	90%	1
12	ATT		218	0	218	100%	0
13	MID		218	8	210	96%	2
14	MID		108	0	108	100%	0
15	GK		218	0	218	100%	0
16	ATT		218	18	200	91%	2
17	DEF		218	49	169	80%	1
18	DEF		131	0	131	100%	1
19	DEF		218	2	216	99%	0
20	DEF		218	109	109	52%	2
21	DEF		218	27	191	88%	3
22	ATT		199	52	147	77%	2
23	MID		199	29	170	88%	2
24	DEF		115	16	99	71%	3
25	MID		123	12	111	55%	2
26	ATT		184	0	184	90%	0
27	DEF		218	15	203	93%	2
28	MID		154	0	154	100%	0
29	MID		218	9	209	90%	1
30	DEF		26	0	26	100%	0
31	ATT		15	0	15	100%	0
32	GK		12	0	12	100%	0
33	ATT		100	5	95	95%	1
34	ATT		67	16	51	75%	4
35	DEF		144	33	111	79%	4
36	ATT		126	0	126	100%	0
37	ATT		43	0	43	100%	0
38	DEF		84	7	77	83%	1
39	MID		72	0	72	100%	0
40	ATT		72	0	72	100%	0
41	MID		67	6	61	94%	1
42	MID		72	0	72	100%	0
43	MID		31	0	31	50%	0
44	MID		26	0	26	67%	0
45	DEF		28	0	28	100%	0
46	ATT		28	0	28	100%	0
47	MID		16	0	16	100%	0
48	GK		12	0	12	100%	0
Squad stats			Total days	missed	Trained	Total %	Injuries
			6512	618	5910	90%	45

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Thank you



Any Questions?