

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture
of OPAT Service Provision in the UK



Measuring practice and outcomes - Registry outputs and what they mean

Mark Gilchrist

Consultant Pharmacist Infectious Diseases, Imperial College Healthcare NHS Trust

Co-Chair BSAC UK OPAT Initiative

mark.gilchrist1@nhs.net

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK

A screenshot of the NORS website's login and registration interface. The page features the NORS logo at the top left. Below it, there is a 'Login' section with a horizontal line, followed by 'Email' and 'Password' input fields. A blue 'ENTER' button with a right-pointing arrow is positioned below the password field. To the right of the button is a link for 'Forgot password?'. Below the login section is a 'Not registered?' section with a blue 'REGISTER' button and a right-pointing arrow.

nors

Login

Email

Password

ENTER ▶

Forgot password?

Not registered?

REGISTER ▶

The OPAT National Outcomes Registry System (NORS)



ADULT

12204 Episodes
201603 Total Treatment Days Saved
988 Adverse Reactions

PAEDIATRICS

637 Episodes
4852 Total Treatment Days Saved
44 Adverse Reactions

www.opatregistry.com

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture
of OPAT Service Provision in the UK



Total 37 services:
England (33)
Scotland (3)
Northern Ireland (1)

Adult (35)
Paediatric (2)

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



The OPAT National Outcomes Registry System (NORS)



ADULT

12040 Episodes
200174 Total Treatment Days Saved
984 Adverse Reactions

PAEDIATRICS

637 Episodes
4852 Total Treatment Days Saved
44 Adverse Reactions

Data comparison comprises:

- Number of patient episodes
- Number of treatment days saved
- Antimicrobial agents used
- Mean Length of Treatment
- OPAT Outcomes
- Infection Outcomes

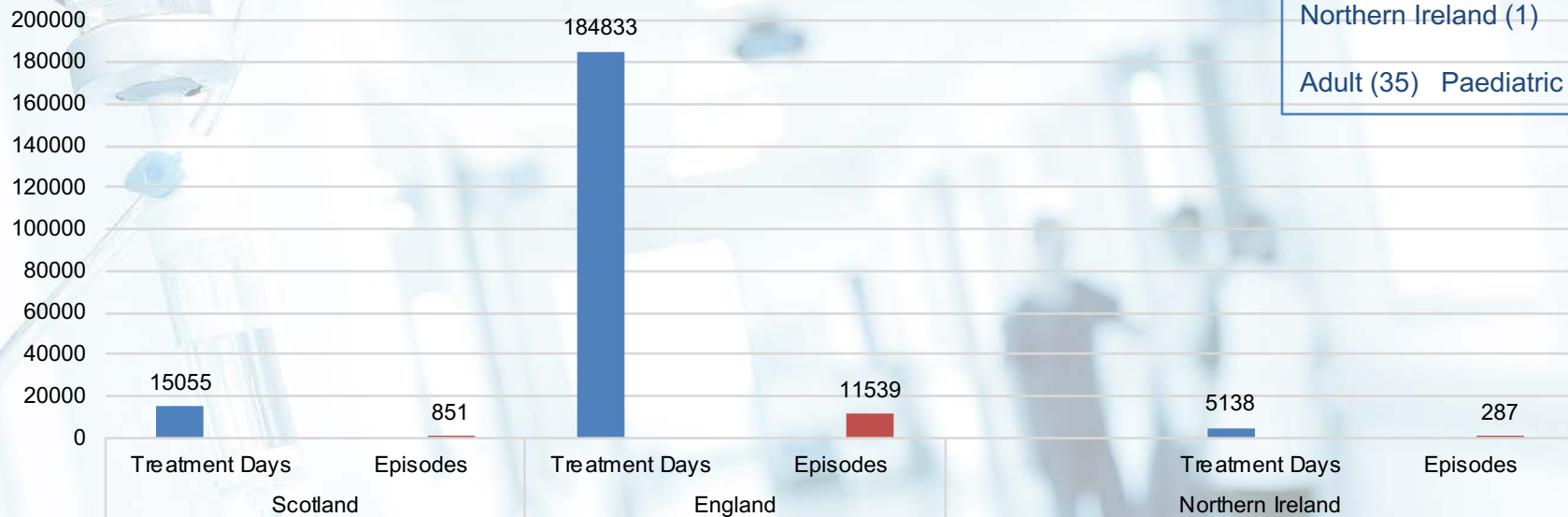
Data as of 3rd December

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



UK data by Country



Total 37 services:
England (33)
Scotland (3)
Northern Ireland (1)

Adult (35) Paediatric (2)

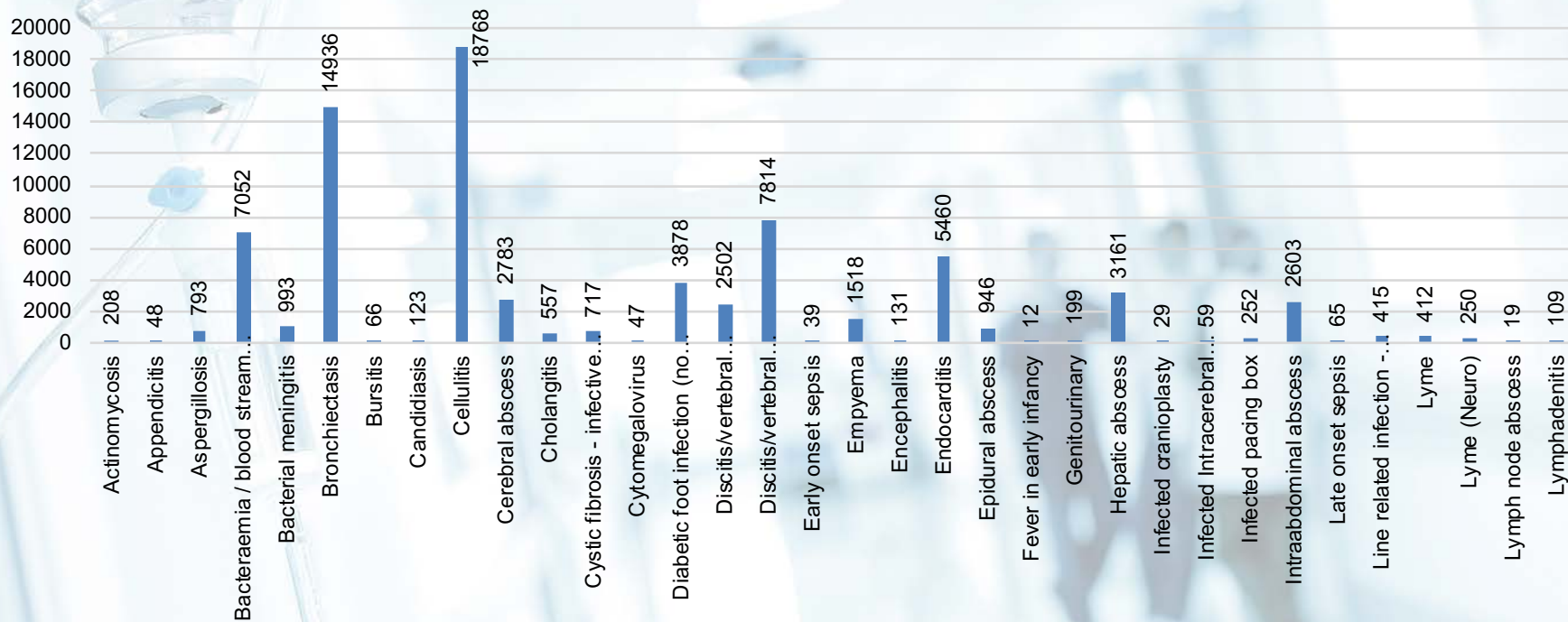
BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



Treatment Days Saved by PID

A-L data set (n=76,964)
Data range: 2015 to 3 December 2018



BSAC OPAT National Outcomes Registry System (NORS)

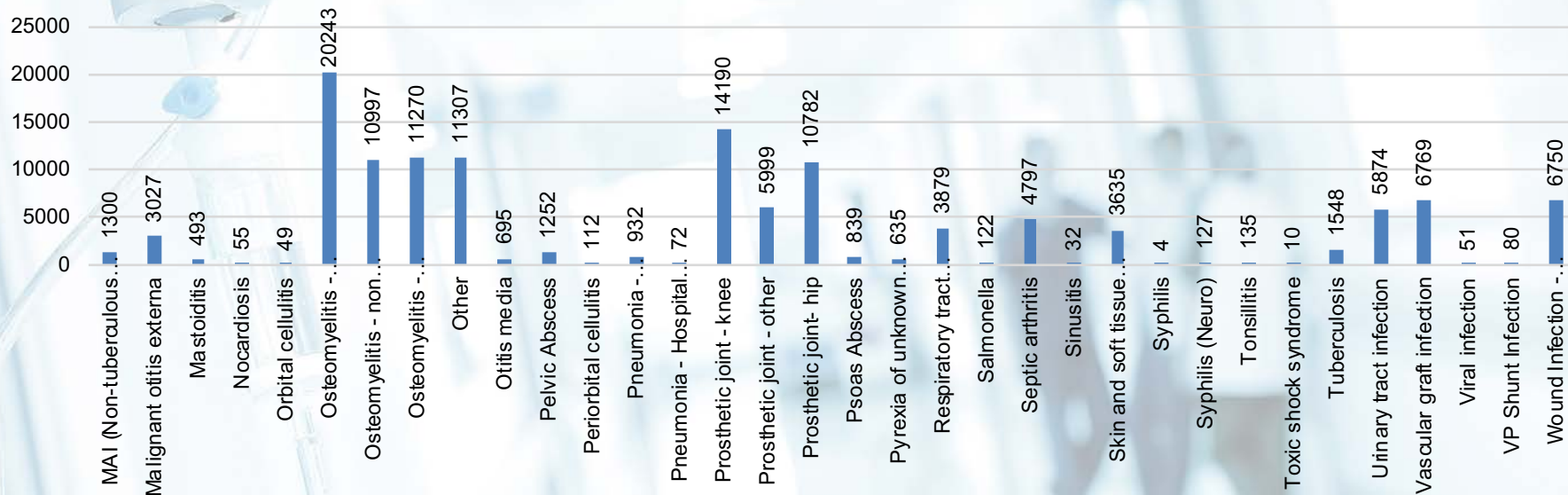
Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



Treatment Days Saved by PID

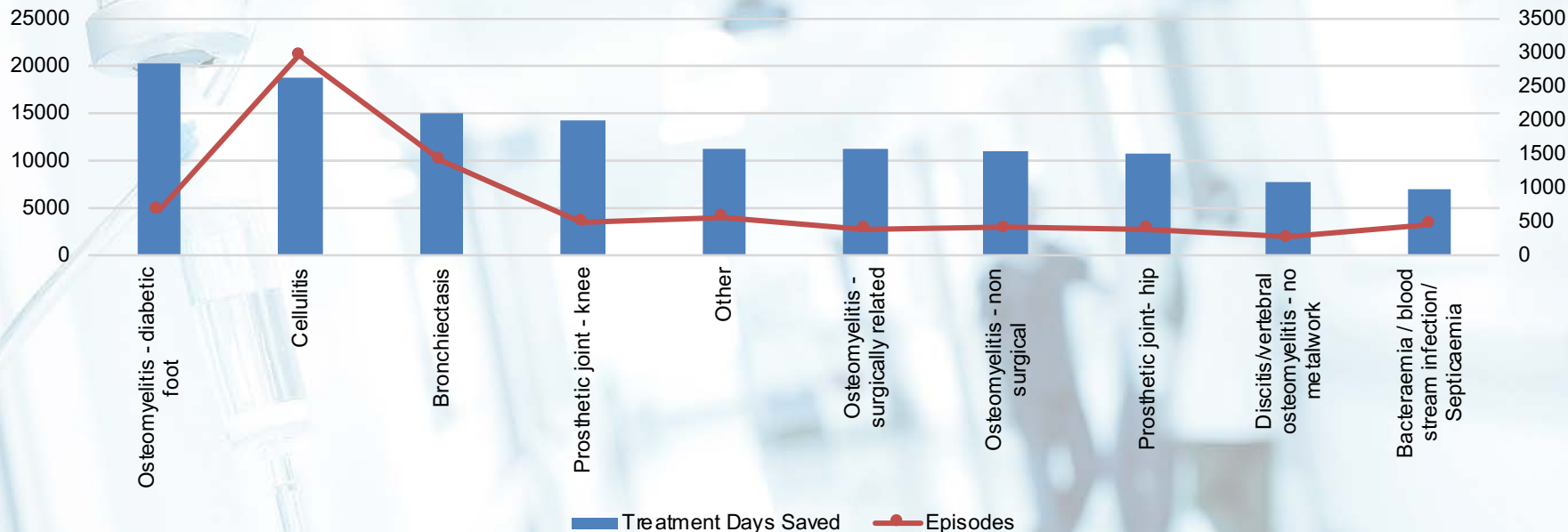
M-Z data set (n= 128,062)

Data range: 2015 to 3 December 2018



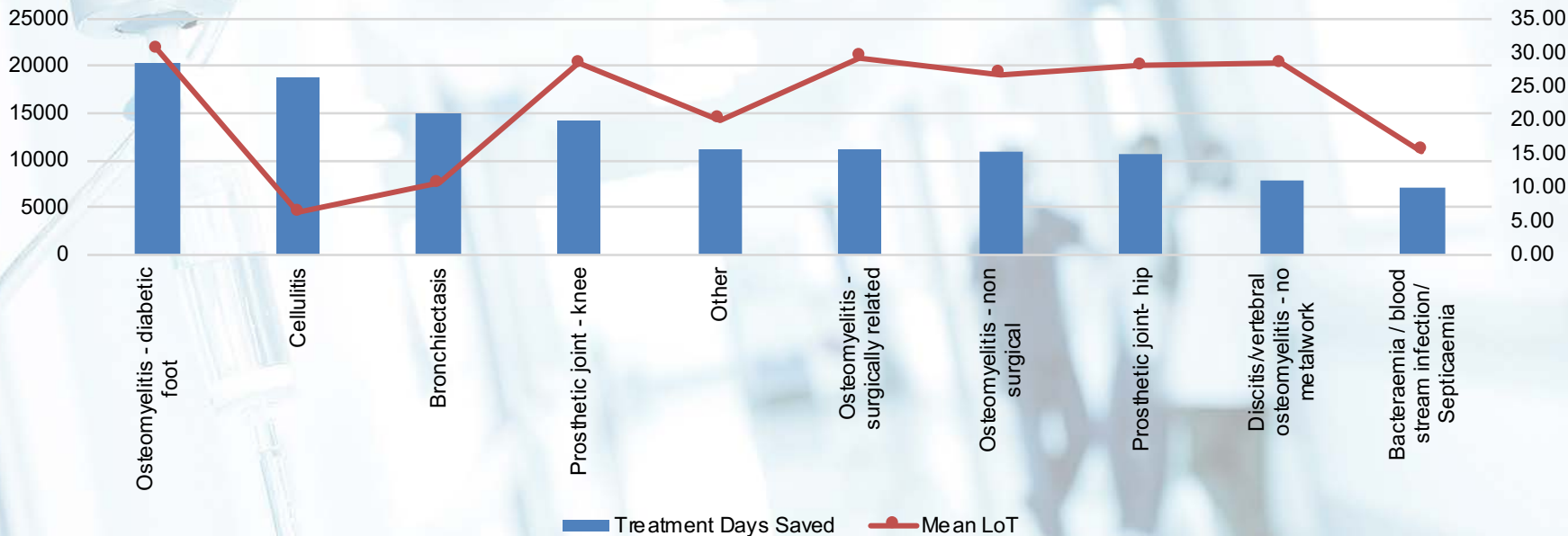
Top 10 PIDs: Treatment Days Saved & Episodes

Data range: 2015 to 3 December 2018



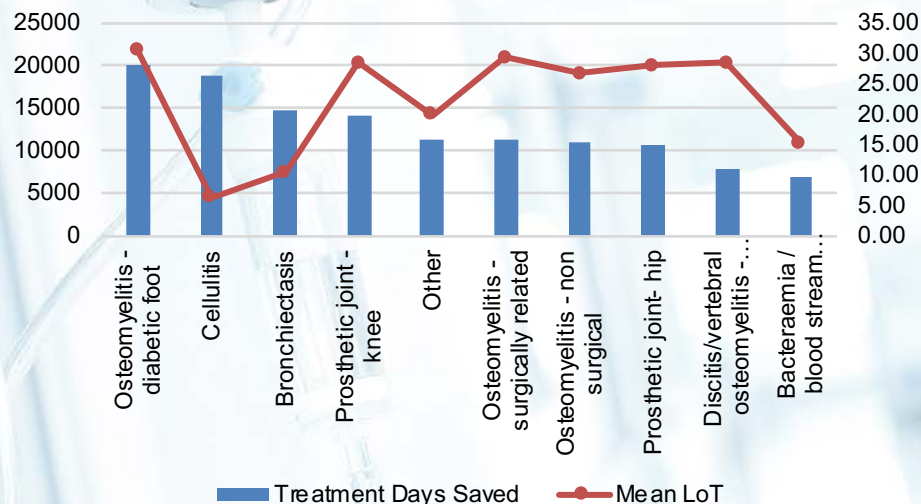
Top 10 PIDs: Treatment Days Saved & Mean Length of Treatment

Data range: 2015 to 3 December 2018



Top 10 PIDs: Treatment Days Saved & Mean Length of Treatment

Data range: 2015 to 3 December 2018



	2015	2016	2017	2018
Osteomyelitis - diabetic foot	31.25	31.73	29.86	28.89
Cellulitis	6.35	6.59	6.53	5.92
Bronchiectasis	10.30	10.40	10.78	10.67
Prosthetic joint - knee	28.99	29.53	26.24	29.54
Other	21.74	22.03	17.89	15.51
Osteomyelitis - surgically related	30.55	27.72	32.32	26.06
Osteomyelitis - non surgical	27.05	24.34	27.72	27.29
Prosthetic joint- hip	26.53	29.75	26.41	29.50
Discitis/vertebral osteomyelitis - no metalwork	42.56	21.45	25.73	26.16
Bacteraemia / blood stream infection/ Septicaemia	15.99	14.00	11.30	18.01

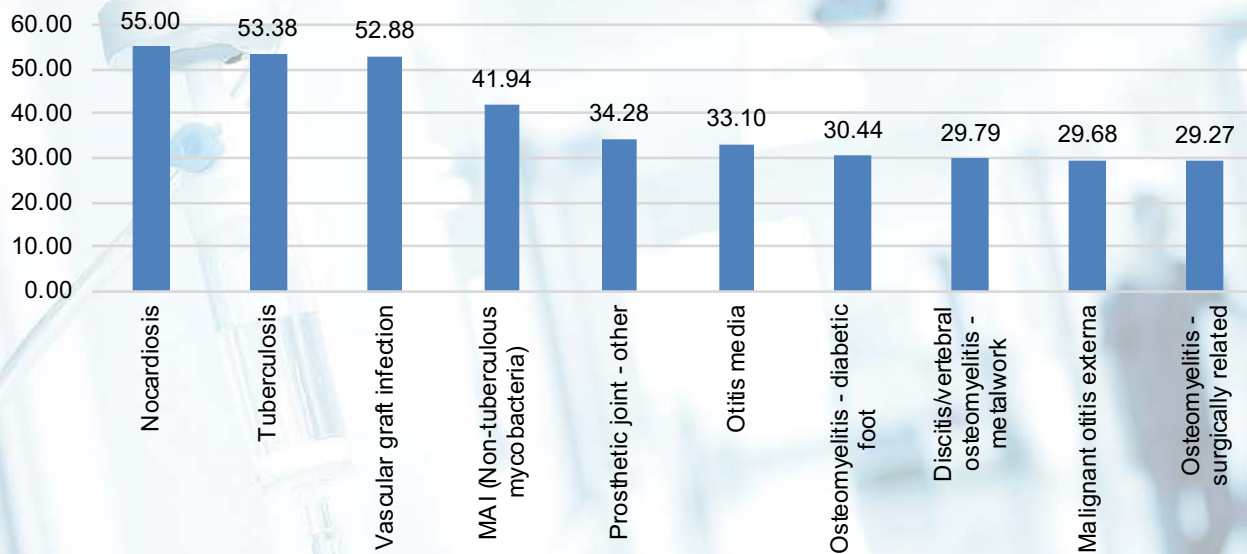
BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



Top 10 PID by Mean Length of Treatment

Data range: 2015 to 3 December 2018



Overall Mean Length of Treatment = 16.17

Top PIDs by Country

England

PID	TREATMENT DAYS
Osteomyelitis - diabetic foot	19898
Cellulitis	18325
Bronchiectasis	14165
Prosthetic joint - knee	12649
Other	10694
Osteomyelitis - surgically related	9964
Prosthetic joint- hip	9376
Osteomyelitis - non surgical	9333
Discitis/vertebral osteomyelitis - no metalwork	6944
Bacteraemia / blood stream infection/ Septicaemia	6396

Scotland

PID	TREATMENT DAYS
Prosthetic joint - other	1860
Prosthetic joint - knee	1574
Osteomyelitis - non surgical	1412
Prosthetic joint- hip	1397
Osteomyelitis - surgically related	974
Skin and soft tissue infection	770
Other	613
Discitis/vertebral osteomyelitis - no metalwork	585
Wound Infection - post surgical	571
Endocarditis	569

Northern Ireland

PID	TREATMENT DAYS
Bronchiectasis	638
Cerebral abscess	391
Intraabdominal abscess	372
Discitis/vertebral osteomyelitis - metalwork	368
Discitis/vertebral osteomyelitis - no metalwork	338
Osteomyelitis - surgically related	332
Hepatic abscess	303
Bacteraemia / blood stream infection/ Septicaemia	286
Osteomyelitis - non surgical	252
Urinary tract infection	189

Data range: 2015 to 3 December 2018

BSAC OPAT National Outcomes Registry System (NORS)

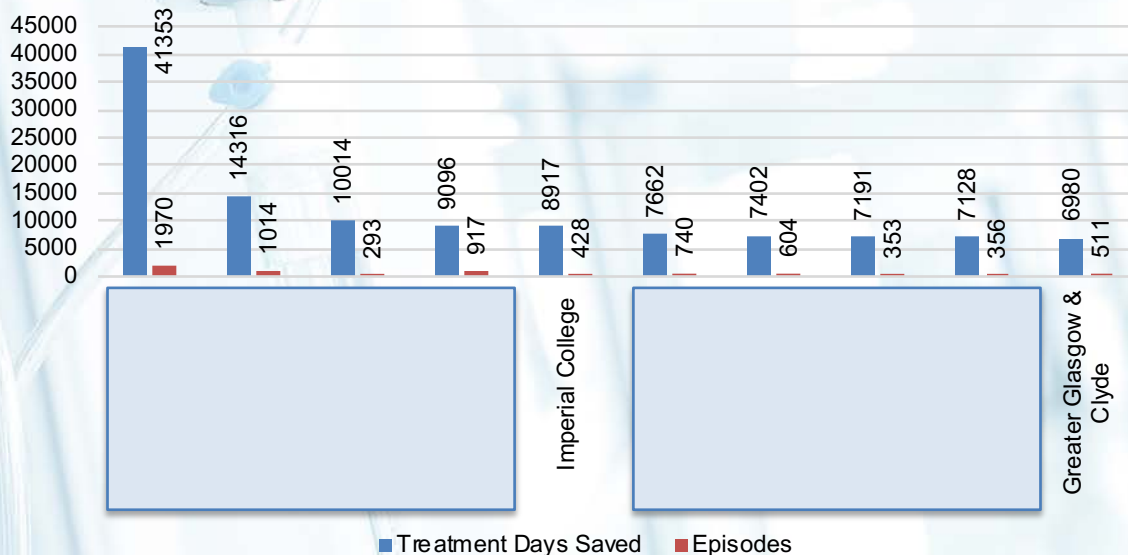
Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



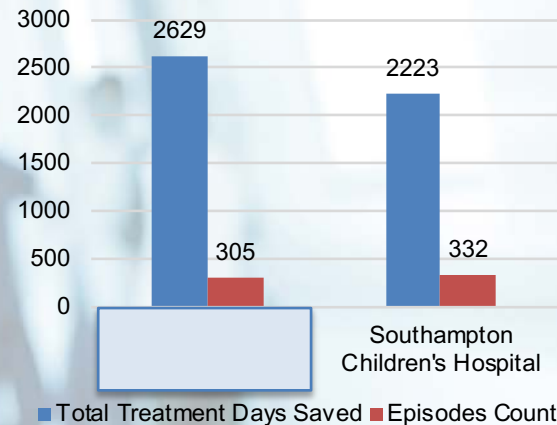
Top 10 Services by Treatment Days Saved & Episodes

Data range: 2015 to 3 December 2018

Adult



Paediatric



Primary Infective Diagnosis

Page 1 of 2 (40 items) 1 2

Region Service Type Host Organisation

Data Headers Year Quarter

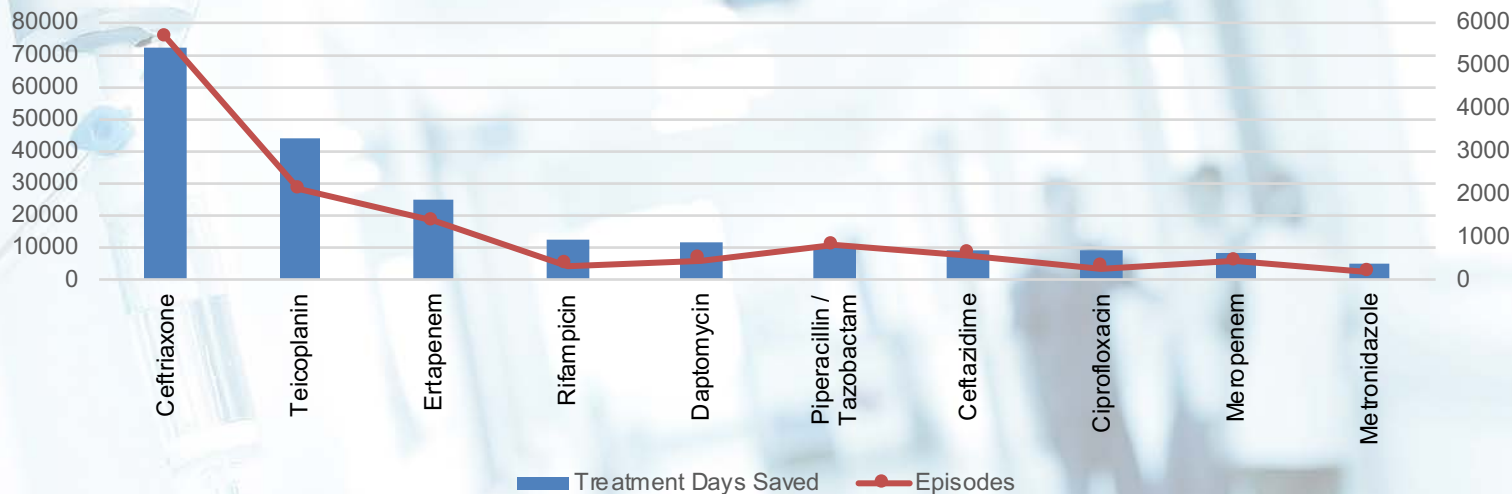
Service	PID	2015			2017			2018			2018			2018 Total					
		Q1 2015			Q4 2017			Q1 2018			Q2 2018			Q3 2018		Episodes Count	Total Treatment Days Saved		
		Total	Episodes Count	Total Treatment Days Saved	Mean LoT	Episodes Count	Total Treatment Days Saved	Mean LoT	Episodes Count	Total Treatment Days Saved	Mean LoT	Episodes Count	Total Treatment Days Saved	Mean LoT					
<input checked="" type="checkbox"/> (Show All)																			
<input checked="" type="checkbox"/> Actinomycosis																			
<input checked="" type="checkbox"/> Appendicitis																			
<input checked="" type="checkbox"/> Aspergillosis																			
<input checked="" type="checkbox"/> Bacteraemia / blood stream infection/ Septicaemia																			
<input checked="" type="checkbox"/> Bacterial meningitis																			
Bacteraemia																			
Bacterial meningitis																			
Bronchiectasis																			
Cellulitis																			
Cerebral abscess		1	24	24.00	5	161	32.20	2	44	22.00	5	123	24.60	5	108	21.60	12	275	
Cholangitis											1	31	31.00				1	31	
Diabetic foot infection (no osteomyelitis)								1	13	13.00					1	21	21.00	2	34
Discitis/vertebral osteomyelitis - metalwork							11	11.00											
Discitis/vertebral osteomyelitis - no metalwork									3	66	22.00	1	32	32.00	4	94	23.50	8	192
Empyema								2	45	22.50	5	82	16.40	3	95	31.67	10	222	
Endocarditis		2	30	15.00	3	77	25.67	5	124	24.80	4	79	19.75	3	47	15.67	12	250	
Epidural abscess								4	159	39.75									
Genitourinary											2	65	32.50				2	65	
Hepatic abscess		2	59	29.50	3	85	28.33	5	78	15.60	1	19	19.00				6	182	

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



Top 10 Antimicrobial Agents Administered



Data range: 2015 to 3 December 2019

Top 10 Antimicrobial Agents by Country

SCOTLAND			ENGLAND			NORTHERN IRELAND		
DRUG	TREATMENT DAYS	EPISODES	DRUG	TREATMENT DAYS	EPISODES	DRUG	TREATMENT DAYS	EPISODES
Ceftriaxone	4040	364	Ceftriaxone	67516	5233	Co-amoxiclav	1239	5
Teicoplanin	2184	86	Teicoplanin	41604	1997	Ceftriaxone	923	62
Daptomycin	1751	68	Ertapenem	22953	1231	Ertapenem	798	65
Ertapenem	1096	55	Rifampicin	12156	326	Linezolid	288	22
Dalbavancin	560	46	Daptomycin	9738	372	Piperacillin/Tazobactam	255	54
Daptomycin + Rifampicin	511	11	Piperacillin/Tazobactam	9123	714	Ceftriaxone + Metronidazole	178	6
Ceftriaxone + Clindamycin	488	29	Ciprofloxacin	8870	264	Teicoplanin	172	12
Other	463	49	Ceftazidime	8829	575	Amikacin + Capreomycin	150	1
Rifampicin	459	11	Meropenem	7722	403	Daptomycin + Linezolid + Teicoplanin	121	1
Metronidazole	367	11	Metronidazole	4406	159	Meropenem	112	14

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



Ceftriaxone Combinations	Treatment Days	Episodes
Ceftriaxone	72479	5659
Ceftriaxone + Ciprofloxacin	132	9
Ceftriaxone + Ciprofloxacin + Clindamycin	104	3
Ceftriaxone + Ciprofloxacin + Gentamicin	48	1
Ceftriaxone + Ciprofloxacin + Rifampicin	19	1
Ceftriaxone + Ciprofloxacin + Teicoplanin	28	1
Ceftriaxone + Clindamycin	528	32
Ceftriaxone + Daptomycin	46	2
Ceftriaxone + Doxycycline	18	2
Ceftriaxone + Ertapenem	20	2
Ceftriaxone + Fluconazole	12	1
Ceftriaxone + Fusidic Acid	80	2
Ceftriaxone + Gentamicin	10	2
Ceftriaxone + Levofloxacin	58	2
Ceftriaxone + Linezolid	77	4
Ceftriaxone + Metronidazole	626	37
Ceftriaxone + Metronidazole + Teicoplanin	14	1
Ceftriaxone + Rifampicin	532	20
Ceftriaxone + Rifampicin + Teicoplanin	12	2
Ceftriaxone + Teicoplanin	152	7

Ceftriaxone administered on its own or with other agents

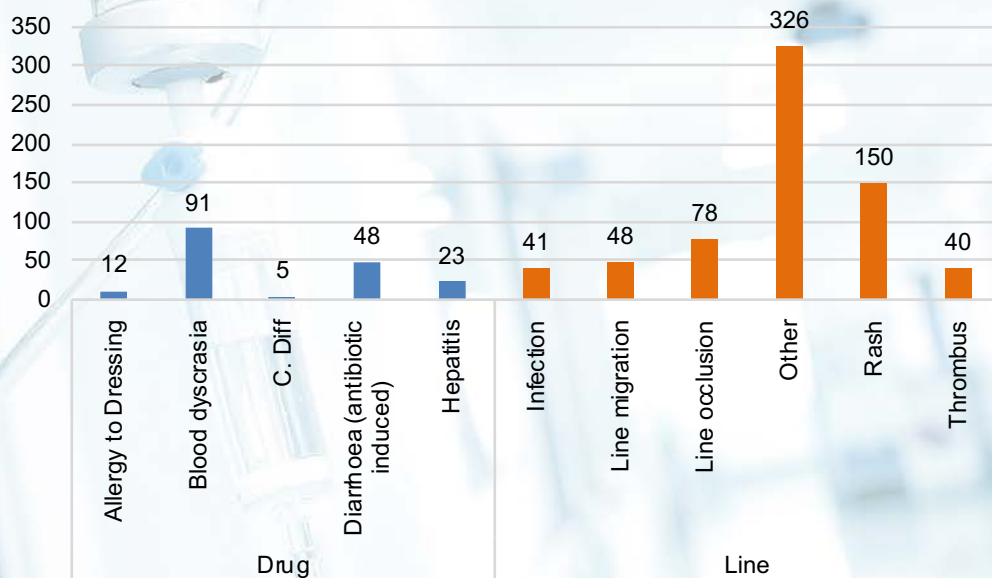
Data range: 2015 to 3 December 2018

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



Adverse Reactions

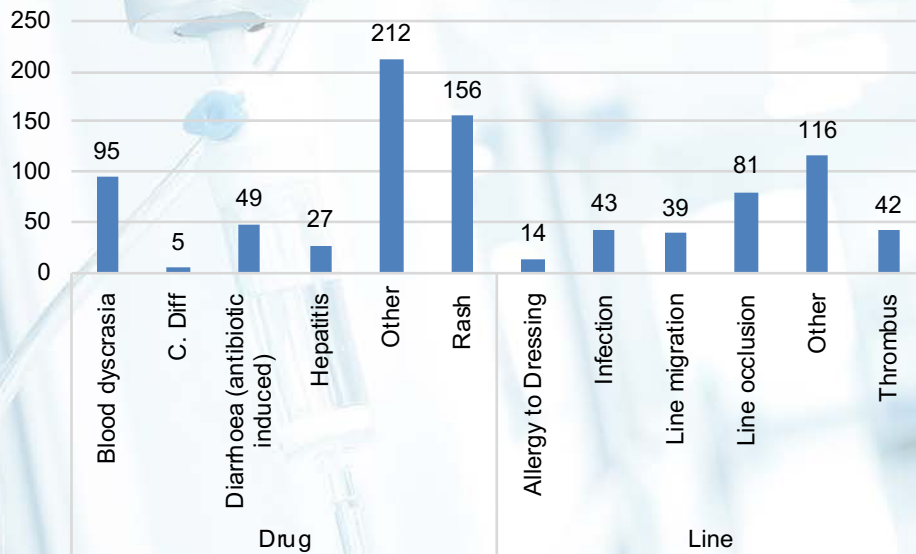


Total Reactions = 919 (7.2% of all episodes)
Drug Reactions = 552 (4.3% of all episodes)
Line Reactions = 367 (2.9% of all episodes)

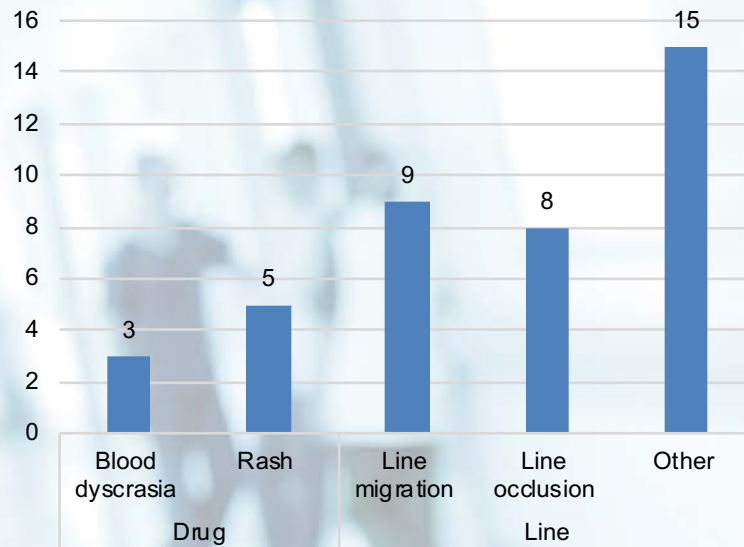
Data range: 2015 to 3 December 2018

Adverse Reactions

Adult



Paediatric

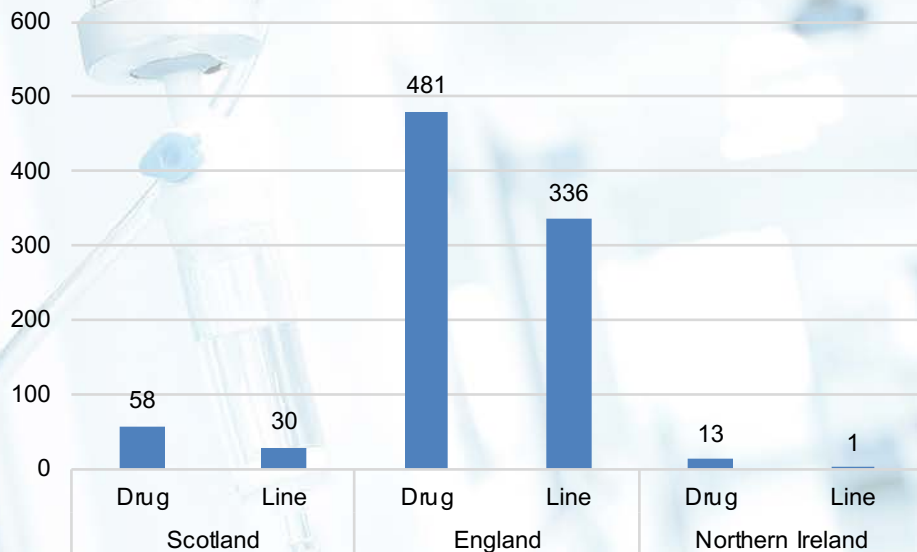


BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



Adverse Reactions by Country



Scotland = 88 (0.7% of all episodes)
Northern Ireland = 14 (0.1% of all episodes)
England = 817 (6.4% of all episodes)

Data range: 2015 to 3 December 2018

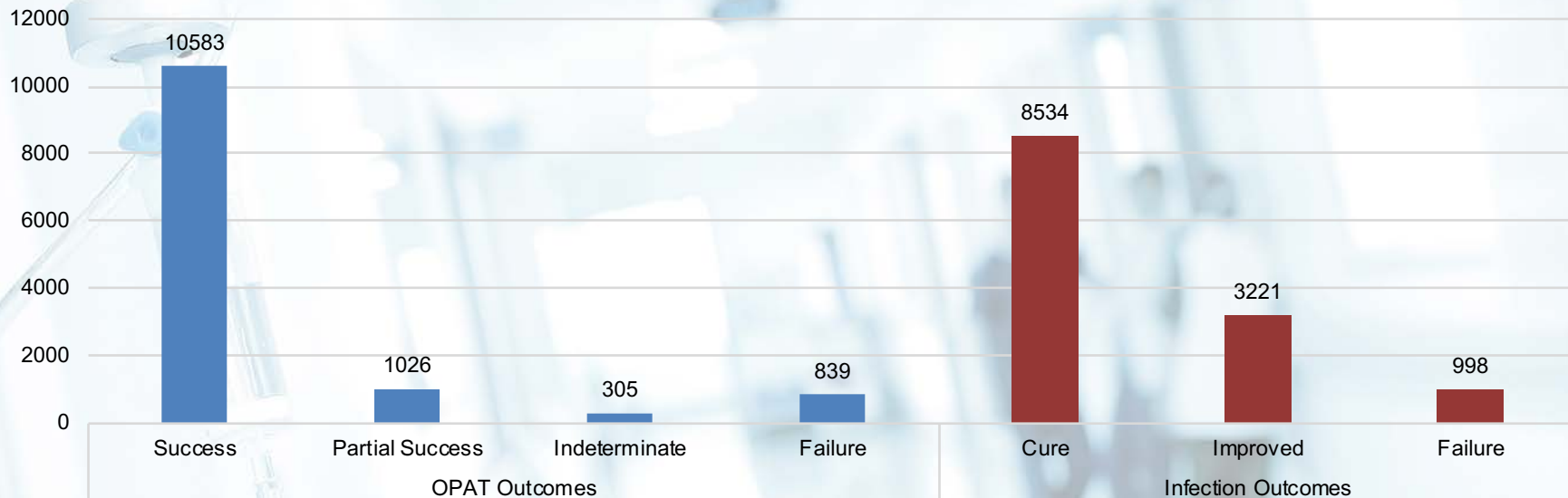
BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



OPAT & Infection Outcomes

Data range: 2015 to 3 December 2018



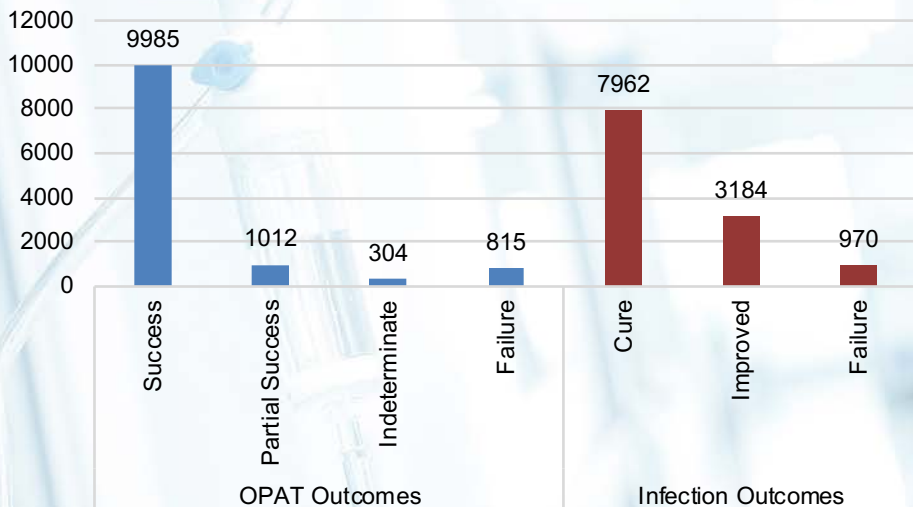
BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK

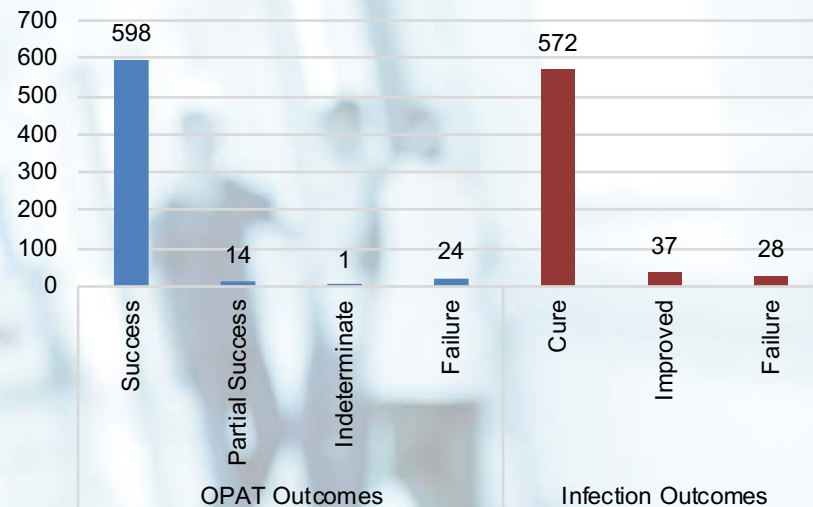


OPAT & Infection Outcomes

Adult



Paediatric



NORS allows OPAT services to:

- Understand UK OPAT geography**
- Benchmarking / learning / improving**
- Drive development of services**
- National tariff agenda**
- Research agenda**

NORS Housekeeping:

- 1. PID: Updated twice a year**
- 2. Antimicrobials: Upon request**
- 3. Please remember to update WTE staff for each quarter of data entered**
- 4. Remember to maintain within T&C and appropriate governance**

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



The British Society for Antimicrobial Chemotherapy Outpatient Parenteral Antimicrobial Therapy National Outcomes Registry System (NORS) User Guide

In support of adult and paediatric OPAT services



The British Society for Antimicrobial Chemotherapy (BSAC) OPAT National Outcomes Registry System (NORS)

Disclaimer / Terms of Conditions

1 REGISTRATION

- 1.1 To view, submit or analyse data using the BSAC OPAT National Outcomes Registry (NORS), users must register at opatregistry.com
- 1.2 To register individuals must provide an email address which is administered by a healthcare service i.e. nhs.net, hscni.net etc. An email will be sent to that email address for account verification and activation. *Users are advised to check their junk/spam mailbox if this email is not received within minutes of registering.*
- 1.3 Registered users of NORS must not share their login details with a third party.
- 1.4 Users will be required to assign themselves to an OPAT Service. Should a Service not exist in the system this must be created. Reporting of paediatric OPAT Services is distinct from reporting of adult OPAT Services.
- 1.5 NORS automatically creates an OPAT lead for each registered Service (this OPAT lead is assigned as the first individual to register for a Service). The name of the OPAT lead can be changed at any point upon request to: OPAT@bsac.org.uk

2 VIEWING DATA

- 2.1 Following registration, all users will automatically have access to the reports function.
- 2.2 Data comparisons can be made between registered OPAT Services, Service Types, Regions, and Host Organisations.

3 ENTERING DATA INTO NORS

- 3.1 Data entry to the registry is voluntary but is welcomed and strongly encouraged to allow shared learning and experience of OPAT practice across the UK & Ireland.
- 3.2 Data is uploaded manually into NORS by each Service. The BSAC is unable to enter data on the behalf of any Service.

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture
of OPAT Service Provision in the UK



NORS development and testing group

Mark Gilchrist, Imperial College Healthcare NHS Trust & BSAC OPAT co-chair

Carolyn Hemsley, Guy's & St Thomas' NHS Foundation Trust

Matthew Laundry, St George's University Hospitals NHS Trust

Sarah Logan, University College Hospital

Sanjay Patel, Southampton Children's Hospital

Sue Snape, Nottingham University Hospitals NHS Trust

Claire Vallance, OPAT Greater Glasgow & Clyde

THANK
YOU

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



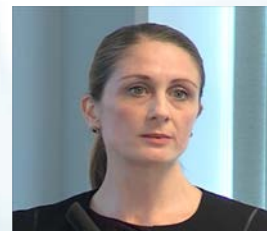
THANK
YOU

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



THANK YOU



BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK



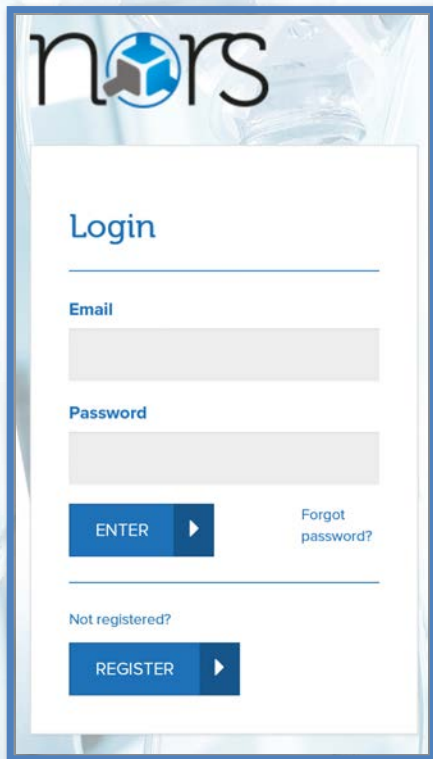
Outpatient Parenteral Antimicrobial Therapy



THANK YOU

BSAC OPAT National Outcomes Registry System (NORS)

Providing the Most Comprehensive Picture of OPAT Service Provision in the UK

A screenshot of the NORS login page. It features the NORS logo at the top left. Below it is a 'Login' section with a horizontal line. There are two input fields: 'Email' and 'Password'. Below the 'Email' field is a blue button with the text 'ENTER' and a right-pointing arrow. To the right of the 'Email' field is a link that says 'Forgot password?'. Below the 'Password' field is another blue button with the text 'REGISTER' and a right-pointing arrow. Below the 'REGISTER' button is a link that says 'Not registered?'.

Login

Email

Password

ENTER

Forgot password?

Not registered?

REGISTER

The OPAT National Outcomes Registry System (NORS)



ADULT

12204 Episodes
201603 Total Treatment Days Saved
988 Adverse Reactions

PAEDIATRICS

637 Episodes
4852 Total Treatment Days Saved
44 Adverse Reactions

WWW.OPATREGISTRY.COM