# Agenda

## Session One: UK Overview, Standards & Outcomes

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>09.00</td>
<td>Registration &amp; Coffee</td>
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</table>
| 09.30 | Welcome & Overview                                                                    | Mark Gilchrist, Consultant Pharmacist, Imperial College Healthcare NHS Trust  
                                           | Dr Andrew Seaton, Consultant Physician, Gartnervel General Hospital, Glasgow |
| 09.35 | The UK OPAT Initiative – then, now & in the future, overview of 2013 Audit           | Dr Andrew Seaton, Consultant Physician, Gartnervel General Hospital, Glasgow |
| 09.55 | OPAT & Paediatric OPAT Standards and Practical Implications for the Hospital and Community | Dr Sanjay Patel, Consultant Paediatrician, Southampton University Hospitals NHS Foundation Trust  
<pre><code>                                       | Dr Ann Chapman, Consultant in Infectious Diseases, Royal Hallamshire Hospital, Sheffield |
</code></pre>
<p>| 10.25 | Recording OPAT treatment episodes and outcomes – review of the UK Patient Management System and initial data from the UK Outcomes Registry | Mark Gilchrist, Consultant Pharmacist, Imperial College Healthcare NHS Trust |
| 10.45 | Coding – the route to establishing an OPAT tariff                                      | Debbie Cumming, Pharmacist, NHS Isle of Wight                              |
| 11.05 | Panel Discussion                                                                      |                                                                         |
| 11.15 | Coffee, Posters &amp; Networking                                                          |                                                                         |</p>
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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
<th>Institution/Position</th>
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<tbody>
<tr>
<td>11.50</td>
<td>Funding acquisition and business case development</td>
<td>Dr Amandip Sahota, ST7 &amp; Dr Susan Alleyne, Consultant Microbiologist</td>
<td>University Hospitals of Leicester NHS Foundation Trust</td>
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<td>12.05</td>
<td>Funding acquisition and business case development: A Scottish perspective</td>
<td>Dr Claire Mackintosh, Regional Infectious Diseases Unit</td>
<td>Western General Hospital, Edinburgh</td>
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<td>12.20</td>
<td>Commissioning OPAT services – balancing the elements</td>
<td>Sharon Rourke, Senior Commissioning Manager, Acute and Service Redesign</td>
<td>NHS Blackpool Clinical Commissioning Group</td>
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<td>12.35</td>
<td>Q&amp;A</td>
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<td>12.45</td>
<td>Lunch, Posters &amp; Practical Demonstrations</td>
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<td>13.45</td>
<td><strong>Intravenous Antibiotics in Homecare – The Bupa Experience</strong></td>
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<td>Stephen Cook, Director of Pharmacy, Bupa Home Healthcare</td>
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<td><strong>SESSION THREE: OPAT Experiences</strong></td>
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<td>Chaired by Dr Andrew Seaton, Consultant Physician, Gartnavel General Hospital, Glasgow</td>
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<td>14.00</td>
<td><strong>The district general hospital experience</strong></td>
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<td>Dr Sajjad Mirza, Consultant Microbiologist, Royal Blackburn Hospital</td>
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<td>14.20</td>
<td><strong>OPAT in the teaching hospital / tertiary centre</strong></td>
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<td>Dr Ann Chapman, Consultant in Infectious Diseases, Royal Hallamshire Hospital, Sheffield</td>
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<td>14.40</td>
<td><strong>OPAT community led service</strong></td>
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<td>Sue O'Hanlon, Lead Nurse IV Therapy, Bridgewater Community Healthcare NHS Trust</td>
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<td>15.00</td>
<td>Panel Discussion</td>
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<td>15.10</td>
<td><strong>Coffee &amp; Networking</strong></td>
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<td><strong>SESSION FOUR: NHS &amp; Privately Provided OPAT Services</strong></td>
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<td>Chaired by Dr Ann Chapman, Consultant in Infectious Diseases, Royal Hallamshire Hospital, Sheffield</td>
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<td>15.30</td>
<td><strong>Horses for Courses - one model does not fit all!</strong></td>
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<td><strong>A successful NHS provided service</strong></td>
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<td>Sister Kate Owen, District Nurse, Dudley Group NHS Foundation Trust</td>
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<td><strong>Successful fulfilment of an OPAT service through a private provider</strong></td>
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<td>Dr Susan Clarke, Clinical Lead for National OPAT Programme Ireland, St James' Hospital, Dublin</td>
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<td>16.20</td>
<td><strong>Providing the best outcomes for patients - closing remarks</strong></td>
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<td>Dr Frances Sanderson, Consultant in Infectious Diseases, Imperial College Healthcare NHS Trust</td>
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<td>16.30</td>
<td>Close</td>
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SESSION ONE: UK Overview, Standards & Outcomes

Chaired by Mark Gilchrist & Dr Andrew Seaton
Welcome and Overview

Mark Gilchrist & Dr Andrew Seaton
The UK OPAT Initiative-
Then, Now & in the Future,
Overview of 2013 Audit

Dr Andrew Seaton
The UK OPAT Initiative – then, now & in the future

R. Andrew Seaton
NHS Greater Glasgow and Clyde, Scotland, UK
OPAT Evidence, Experience and Consensus

- OPAT, CoPAT since early 80s in USA
  - OPAT registry until c2002
- Hospital at the home in Australia (1990s-)
- O(H)PAT, NIPIV in Italy, Netherlands, Austria developing 1990s-

OPAT Evidence

• Disease–specific *guidance* (Endocarditis)
• 2 RCTs of OPAT: 1999 (n=100, variety) and 2004 (n=200, SSTI).
  – Mainly Cefazolin BD
• Hospital care at home *systematic review* (total 1327 patients) 2009
• RCTs of new antimicrobials includes OPAT Rx pts
  Board et al *Aust N Z J Public Health* 2000; 24:305
  Shepperd et al CMAJ 2009; 180: 175
History of OPAT care in the UK

- Ad hoc development since mid-late 1990s
- Traditionally ID led
  - Oxford: Community based nursing team
  - Dundee: Hospital team with strong community nursing links
- Approx 32 centres in 1999
- UK consensus statement 1998
- European consensus 2000
- *Patient Group Directions* 2005 (UK, SSTI)

## Barriers to OPAT in the UK (1999)

### Survey of UK Infection Specialists (n=157)*

<table>
<thead>
<tr>
<th>Perceived barrier to OPAT</th>
<th>Proportion of respondents, %</th>
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<tbody>
<tr>
<td>Funding issues</td>
<td>35</td>
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<tr>
<td>Difficult to co-ordinate/oversee care</td>
<td>30</td>
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<tr>
<td>Fragmented distribution of patients</td>
<td>27</td>
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<td>Training issues</td>
<td>17</td>
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<td>Lack of guidelines/experience</td>
<td>13</td>
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<td>Time constraints</td>
<td>11</td>
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<td>Safety (line care or drug administration)</td>
<td>10</td>
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<tr>
<td>Geographical constraints</td>
<td>5</td>
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* Estimate of 32 OPAT services in UK

BSAC OPAT Initiative 2009
Objectives:

• Publication of peer reviewed standards for the delivery of OPAT services
• Business case models to assist HCPs develop local OPAT services
• Measure the impact of the project (clinical effectiveness, economic impact, patient experience)
• UK-wide educational workshops to inform, instruct and support those wishing to implement OPAT services in their locality
• Development of web-based educational resources to support those with, or wishing to establish, OPAT
BSAC OPAT Projects 2009 -

- UK Stakeholder Meeting 2009: Chair Dilip Nathwani
- Working parties established
  - OPAT Good Practice recommendations: BSAC/BIA
  - OPAT Business Case toolkit
  - OPAT Patient Management System & Registry
- E-OPAT
- UK Workshops
# UK OPAT Status 1999 vs 2011

<table>
<thead>
<tr>
<th>Category</th>
<th>1999</th>
<th>2011</th>
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<tbody>
<tr>
<td>Infection sp. Contacted</td>
<td>345</td>
<td>296</td>
</tr>
<tr>
<td>Response to survey</td>
<td>46%</td>
<td>66%</td>
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<tr>
<td>Existing OPAT service</td>
<td>32 (21%)</td>
<td>107 (64%)</td>
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<tr>
<td>OPAT service + like to expand</td>
<td>-</td>
<td>85 (86%)</td>
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<tr>
<td>No OPAT but like to develop</td>
<td>125 (61%)</td>
<td>48 (81%)</td>
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<tr>
<td>Main development barriers:</td>
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<tr>
<td>Funding</td>
<td>35%</td>
<td>Clinician</td>
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<tr>
<td>Leadership</td>
<td>34%</td>
<td>Nurse</td>
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<tr>
<td>Coordination</td>
<td>37%</td>
<td>Bus. case</td>
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European Summit on OPAT 2011
Website [www.e-opat.com](http://www.e-opat.com) launched 2011

Congratulations Dundee – Patient Management System installed

Congratulations to Dundee who are trailblazers for the new OPAT Patient Management System. The OPAT team is looking forward to using the PMS, commonly known as the OPAT database, and being the first contributors to the UK National OPAT Register. The Patient Management System is now available for installation across the United Kingdom and Ireland. [...]

Forthcoming Meetings

Who Should Attend?

Register

Software Tools

The Business Case Toolkit

OPAT Patient Management System

Outcomes Registry
Good practice recommendations for outpatient parenteral antimicrobial therapy (OPAT) in adults in the UK: a consensus statement

Ann L. N. Chapman1*, R. Andrew Seaton2, Mike A. Cooper3, Sara Hedderwick4, Vicky Goodall3, Corienne Reed5, Frances Sanderson6 and Dilip Nathwani7 on behalf of the BSAC/BIA OPAT Project Good Practice Recommendations Working Group†

1Department of Infection and Tropical Medicine, Royal Hallamshire Hospital, Sheffield S10 2JF, UK; 2Brownlee Centre, Gartnavel General Hospital, Glasgow G12 0YN, UK; 3Department of Microbiology, New Cross Hospital, Wolverhampton WV10 0QP, UK; 4Royal Victoria Hospital, Belfast BT12 6BA, UK; 5Salford Royal Foundation Trust, Salford M6 8HD, UK; 6Clinical Infectious Diseases, Charing Cross Hospital, Fulham Palace Road, London W6 8RF, UK; 7Ninewells Hospital & Medical School, Dundee DD1 9SY, UK

*Corresponding author. E-mail: ann.chapman@sth.nhs.uk
Good practice recommendations for outpatient parenteral antimicrobial therapy (OPAT) in adults in the UK: a consensus statement

1. OPAT team and service structure
2. Patient selection
3. Antimicrobial management and drug delivery
4. Monitoring of the patient during OPAT
5. Outcome monitoring and clinical governance
• OPAT software tools launched in 2012
Patient Management System

First Name: 
Surname: 
NHS Number: 
Speciality: 
Commissioning Health Boards: 

Refereed date: 
Date of birth: 
Ward: 

All fields marked with * are mandatory
OPAT Registry

BSAC - Supporting the clinical need for OPAT

Log in to access detailed reports and upload your quarterly data.

Total number of OPAT centres: 90
Total number of patients treated: 304

Powered by Pharma Mix - Help - Disclaimer
The British Society for Antimicrobial Chemotherapy (BSAC) © 2012 Registered Charity 1093118, Registered as a company limited by guarantee in England & Wales No: 4443910.
BSAC OPAT Workshops

• 8 Events, UK wide
• Feedback from >200 attendees
  – 98.1% presentations appropriate
  – 97.6% meeting content adequate for educational needs
  – 97.5% excellent/good workshop
BSAC OPAT Workshops: Feedback...

- More on antimicrobial regimens including oral Rx and PK/PD
- More case based discussions
- More “practical tips”
- More discussion on antimicrobial choices. It appeared that ceftriaxone and teicoplanin were the mainstay of antimicrobial treatment options. This can have problems such as CDI and VRE/GRE respectively. Plus, they wouldn't be common treatment choices in (my) hospital setting, begging the question 'are patients getting better treatment by staying in hospital?’
BSAC OPAT Standing Committee 2013
Workstreams

- Patient Management System, Audit and National Outcomes Registry
- Community Led OPAT Services
- Economics and Coding
- Paediatric OPAT (P-OPAT)
- Drug Stability and Testing
- Oral therapies, Antimicrobial Stewardship and OPAT
Dr Matthew Dryden, Hampshire  
BSAC General Secretary | Chair of the IV to Oral Switch in the OPAT Setting Work stream

Dr Mike Cooper, Consultant Microbiologist, Wolverhampton  
BSAC Meetings Secretary

Dr Andrew Seaton, Consultant Physician, Glasgow  
Co-Chair of the Standing Committee

Dr Mark Gilchrist, Consultant Infectious Diseases Pharmacist, London  
Co-Chair of the Standing Committee | Chair, Patient Management System Work stream | Member, Audit and National Outcomes Registry Work stream | Member, Drug Stability and Testing Work stream

Dr Graeme Jones, Consultant Microbiologist, Southampton  
Co-Chair, Economics and Coding Work stream

Debbie Cummings, Pharmacist, Isle of Wight  
Co-Chair, Economics and Coding Work stream

Tim Hills, Antimicrobial Pharmacist, Nottingham  
Co-Chair, Drug Stability and Testing Work stream

Dr Susan Snape, Consultant in Infectious Diseases, Nottingham  
Co-Chair, Drug Stability and Testing Work stream

Dr Frances Sanderson, Consultant in Infectious Diseases, London  
Chair, Community Led OPAT Services Work stream

Dr Sanjay Patel, Consultant Paediatrician, Southampton  
Chair, Paediatric OPAT (P-OPAT) Work stream | Member, Patient Management System, Audit and National Outcomes Registry Work stream

Dr Ann Chapman, Consultant in Infectious Diseases, Sheffield  
Member, Community Led OPAT Services Work stream

Dr Paul Jhass, Advanced Pharmacist, Kent  
Member, Community Led OPAT Services Work stream

Sue O’Hanlon, Lead Nurse IV Therapy, Bridgewater  
Nursing Lead | Member, Community Led OPAT Services Work stream
2013 Survey of 193 Trusts/HBs

- 119 (63%) response
- 68% have service
- 82% Hospital based
- 85% would like to extend the service
- 57% Nurse resource main barrier to development
2013: OPAT Models

We use different models for different services.
2013 Survey: No OPAT service

- 87% would like an OPAT service
- 41%: Cost most important reason for not having a service
- 60%: Nurse/clinician availability main barrier to service provision
We use different models for different services.
Status of OPAT Development

- Think it’s a good idea but no action taken: 9
- Starting to develop a business case: 6
- Business case approved: 2
- Lead clinician and MDT appointed: 1
- Service models out to tender: 1
- Service agreed: 1
OPAT in the UK: The Future?

• Peer support of further OPAT development
• Funding and reimbursement: Tackle at national level
• UK roll out of OPAT Patient Management System
• UK-wide centre upload of data to OPAT Registry
• Release of paediatric software tools (POPAT)
Managing Length of Stay

Maximise ambulatory care

Green bed days vs red bed days – flow management – making it happen!

Complex support needs – but how much is hospital based decompensation?

Acknowledgement: Gautam Ray
2011 Survey: Which patients would you like to extend to?
# Challenges of Emerging UK models of OPAT

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<tr>
<th>Leadership</th>
<th>Complex infection Mx expertise</th>
<th>Inpatient resource</th>
<th>Facility to avoid admission</th>
<th>Pan hospital reach</th>
<th>“Ubiquity”</th>
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<td>ID specialist</td>
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<td>Trend over time</td>
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<td>Referral from non-local hospital</td>
<td>$X^2_{trend} = 72.92$ p &lt; 0.0001</td>
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<td>Referral from secondary care</td>
<td>$X^2_{trend} = 26.07$ p &lt; 0.0001</td>
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<td>Co-morbidity</td>
<td>$X^2_{trend} = 24.07$ p &lt; 0.0001</td>
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<td>Non-SSTI infection</td>
<td>$X^2_{trend} = 97.14$ p &lt; 0.0001</td>
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<td>MRSA infections (as % of <em>S. aureus</em>)</td>
<td>$X^2_{trend} = 6.682$ p = 0.0097</td>
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<td>G-ve infections (% of +ve cultures)</td>
<td>$X^2_{trend} = 10.491$ p = 0.0012</td>
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<td>Self / carer antibiotic admin</td>
<td>$X^2_{trend} = 48.49$ p &lt; 0.0001</td>
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Barr et al, IJAA 2012
OPAT in the UK: Challenges?

- Changing hospital population
- Antimicrobial Stewardship
  - Infection specialist leadership
  - IVOST and Duration of Therapy
  - Restrictions on IV agents (stability / frequency of administration)
- Engagement with “OPAT” within other models of ambulatory care
- Funding and OPAT tariffs
Summary and Conclusions

• Interest and practice of OPAT growing in UK
• Different models of care developing with different focus
• Key developments via the BSAC Initiative
• Resource/personnel, “business case” development main barriers to development and expansion
• Funding and reimbursement is a challenge
Acknowledgements

Tracey Guise, Esme Caruthers (BSAC), Terri Martin and Debbie Lancaster (Pharma Mix), Mark Gilchrist and BSAC standing committee members
Past OPAT initiative chair Dilip Nathwani