A clinician’s view of clinical homecare

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The argument for clinical homecare

- ‘Treatment outside the traditional hospital setting’

- McKinsey report Sept 2009
  - Significant inefficiency in NHS
  - ‘Around 40% of patients in a typical hospital do not need to be there at any one time. The biggest causes were ….. a lack of more suitable care facilities in the patient’s own home or community.’

- Admission avoidance / early discharge schemes
  - Similar clinical outcomes (reduced 6/12 mortality)
  - Similar or lower cost
  - Improved patient satisfaction

Shepperd et al., CMAJ 2009; Cochrane review, 2009
Care closer to home

HOSPITAL-BASED

Outpatient clinic

Self-administration

COMMUNITY-BASED

Visiting nurse

Community clinic
Key issues in delivery of clinical homecare

- Patient-focused
- ‘Closer to home’
- Quality
  - Clinical effectiveness
  - Safety
  - Innovation new therapies
    - new lines/infusion systems
- Cost-effectiveness
Outpatient Parenteral Antibiotic Therapy (OPAT)

‘Administration of intravenous antibiotic therapy in the community or outpatient setting as an alternative to inpatient care’

- Patients with infections requiring IV antibiotics
- Otherwise fit
- Reduced LOS
- Admission avoidance
The Sheffield OPAT service

- Established January 2006
- Multidisciplinary team approach
- 10-20 patients at any time
- Referrals from wards, A+E and GPs
- Models of care:
  - Outpatient attendances
  - Patient/carer self-administration
  - Community nurses (restricted to some areas)
Patient groups

Short-term:
- Mainly cellulitis (60%)
- Referral from wards (50%), MAU, A+E, GPs
- Daily OP attendance
- Average treatment 4.9 days

Longer term:
- Wide range of infections
- Referral mainly from wards
- Most self-administration
- Treatment for 2-6+ weeks
2 year activity data
(total 334 episodes)
Clinical outcomes (334 episodes)

- **Improved**: 274 episodes
- **Cure**: 17 episodes
- **Re-admitted**: 21 episodes
- **No change**: 11 episodes
- **Change of plan**: 11 episodes

**Readmissions:** 6 unrelated, 6 inappropriate referral, 1 symptom control, 4 failure to respond, 4 OPAT complication (AB reaction, line infection, fracture, cut line)
Patient 1

- 45 year old man
- Cellulitis of right ankle
- Oral flucloxacillin from GP
- Extension of cellulitis with fever and malaise
- Reviewed by GP: reasonably well, normal obs
- GP referred patient to OPAT specialist nurse
- Patient arrived at OPAT with referral letter
- Assessed by specialist nurse and doctor, blood tests, started on once daily IV ceftriaxone through a ‘butterfly’
- Daily attendance for 3 days
- Switched to oral antibiotics and discharged from OPAT
Patient 2

- 52 year old man
- Admitted with 1 week history of fever, sweats and rigors
- BCs Staph aureus, ECHO aortic valve endocarditis
- Treated with IV flucloxacillin 2g qds
- Improved rapidly
- After 2 weeks, consideration of OPAT
- PICC line inserted, trained to self-administer
- Discharged on day 19 to complete 6 weeks of therapy at home
- Weekly OPAT medical and nursing review, cardiology review and blood tests
**Patient 3**

- 76 year old woman
- Presented with progressive lumbar back pain and reduced mobility
- MRI showed discitis, biopsy grew CNS
- Treated with once daily IV teicoplanin and oral rifampicin
- Physiotherapy and mobilisation
- Home with antibiotics administered by community nurses
- Weekly medical and nursing review
- Completed 3 months of antibiotic therapy with good response
OPAT

- Clinically effective
- Cost-effective
- Patients prefer it:

“It allowed me time with my baby daughter”

“They trained my wife so we did not have to visit every day.”

“It gave me my life back …. being able to contribute towards my treatment felt so great.”

“Clear and concise information – security of knowing that advice and support was readily available but still feeling empowered.”

“The nurses were like angels, nothing was too much trouble for them. A smile, a friendly word and even a cup of tea.”
Cost-effectiveness

- Direct costs of healthcare in inpatient or outpatient setting
- Indirect benefits e.g. increased bed capacity due to admission avoidance / early discharge
- OPAT / inpatient cost ratios:

<table>
<thead>
<tr>
<th>ID Unit costs</th>
<th>National average costs</th>
<th>‘Hotel’ costs</th>
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</thead>
<tbody>
<tr>
<td>41%</td>
<td>47%</td>
<td>61%</td>
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Chapman et al., JAC 2009
Safety

- **Clinical risk:**
  - Reduced supervision / access to help if problems occur

- **Survey of US ID Consultants 2006:**
  - 65% respondents noted serious complications in previous year

- **OPAT Map to identify risks associated with OPAT:**
  - 6 processes, 67 sub-processes and 217 possible failures
  - Key areas: patient suitability, MDT involvement, communication

Chary *et al.*, CID 2006; Gilchrist *et al.*, JAC 2009
Reducing the risks of OPAT (1)

- Service design:
  - Team composition
  - Clinical accountability
  - Regular /ad hoc monitoring
  - 24-hour access
  - Documentation

- Careful patient selection:
  - MDT assessment
  - Inclusion / exclusion criteria
Reducing the risks of OPAT (2)

- **Communication:**
  - OPAT team
  - Referring clinician
  - Community
  - Patient

- **Outcome monitoring:**
  - Clinical outcomes
  - Adverse events
  - Re-admission rates
  - Audit
  - Patient views
UK OPAT guidelines

Good Practice Recommendations for Outpatient Parenteral Antibiotic Therapy (OPAT) in Adults in the UK: a consensus statement

Ann LN Chapman, R Andrew Seaton, Mike A Cooper, Sara Hedderwick, Vicky Parker, Corienne Reed, Frances Sanderson, Dilip Nathwani, on behalf of the BSAC/BIA OPAT Project Good Practice Recommendations Working Group

Consultation period until 21 October 2011
Available at: http://e-opat.com/opat-standards
UK OPAT guidelines

5 key areas:

- OPAT team and service structure
- Patient selection
- Antimicrobial management and drug delivery
- Monitoring of the patient during therapy
- Outcome monitoring and clinical governance
Conclusions

- ‘The time / health climate is right’ for clinical homecare
- Wide variety of potential applications and models of care
- Universally preferred by patients to inpatient care
- OPAT is one example
- Clinically and cost effective
- But importance of a well-designed service incorporating structures and policies to minimise risk