Improving outcomes for the ageing opioid-dependent population

Mr Duncan Hill
NHS Lanarkshire
Scotland
Disclosures

• I am receiving an honorarium from PCMS for delivering educational sessions and presentations for IOTOD 2019 (both European conference and Asia webinar)

• In the last 12 months:
  – I am to receive an honorarium from AbbVie for delivering and participating in educational sessions

• Beyond 12 months:
  – I received partial educational support for participation in the Pharmacy Management Clinical Leadership in Pharmacy (CLIP) programme. Support was provided by the programme’s sponsor companies (Boehringer Ingelheim, Meda Pharmaceuticals, MSD, NAPP Pharmaceuticals and Sanofi)
  – I received honoraria or consultation fees from PCM, Indivior, Reckitt Benckiser and Lundbeck in the field of addiction medicine for delivering professional development activities
  – I received travel and support for attending educational conferences (IOTOD) from Indivior and Reckitt Benckiser
Learning objective

After this talk participants should be able to:

- Recall the importance of screening older opioid-dependent patients for underlying comorbidities and personalising treatment accordingly
Who exactly is an older person with a drug problem (OPDP)?

>35 years old

Problems:
- Social
- Psychological
- Physical
- Legal

Related to intoxication and/or regular excessive consumption and/or dependence as a result of their drug use

The greying of Europe’s drug-using population

- As with the general population, the drug-using population is ageing, including those who are in treatment

Mean age (years) at first treatment entry for heroin dependence:

- Croatia: 37 (2016)
- Portugal: 39.3 (2016)
- Greece: 35.8 (2016)
Why does this matter?

Their physiological health age is **older**

Numerous **somatic** and **psychiatric** conditions

Often, conditions **not identified** or **treated**

Increased **morbidity** and **mortality**

Failure to address these conditions will result in an increased burden on healthcare services
Physiological health morbidities are more prevalent in OPDP

- Cardiovascular disease (CVD)
- Respiratory disease
- Chronic pain
- HIV and HCV
- Earlier onset: • Diabetes • Neurological disorders • Cancer
- Poor diet and nutrition
- Poor dental health
- Increased risk of overdose death

How prevalent are these comorbidities?

PDP >40 years old **3.3× more likely** to die from a comorbidity vs. younger PDP
- Liver disease
- Neoplasms
- Chronic lower respiratory infections
- Viral hepatitis

**CVD and neoplasms** most common cause of death in PDP >55 years old in one study

Prevalence in OPDP vs younger PDP:
- HIV ~5× higher
- HCV ~2× higher

Respiratory disease

Prevalence?

• **COPD**
  - 49% in OPDP vs. 11.7% in general population

• **Asthma**
  - Reported by 27.6% of OPDP

• **Tobacco smoking**
  - 84–98% of people in OST are current or former smokers
  - Further exacerbates respiratory disease

What needs to be done?

• PDP often **fail to engage** with primary care services

• Need to **actively screen** OPDP for chronic respiratory diseases

• Could be carried out in:
  - General practice
  - Specialist drug services
  - Community pharmacies

• **Referral** to specialists may be required

• Consider **smoking cessation**

Why screen for respiratory disease?

Comorbidities may increase overdose risk

Respiratory disease reduces QOL

In one study as a result of their COPD:

52% reported ‘they suffer from sleep disturbances’

54% reported ‘they could not complete the activities they like to do’

Risk factor | Hazard ratio
--- | ---
Cardiovascular event* | 3.90
Respiratory eventǂ | 3.13

Hazard ratios associated with potential risks for fatal opioid overdose post OST

* Diseases of pulmonary circulation (including pulmonary heart disease), other forms of heart disease, diseases of the veins

ǂ Acute lower respiratory infections, upper respiratory tract disease, chronic lower respiratory disease

Failure to screen now will increase future burden on healthcare services

Is it feasible to undertake respiratory screening of PDP in a community clinic?

**Study design**
- Single-centre UK community substance misuse clinic
- 36 clinic attendees participated:
  - 8 had pre-diagnosed asthma
  - 28 had no prior diagnosis of lung disease
- Screening tools:
  - Spirometry without bronchodilation
  - Questionnaires
    - Health-related QOL EQ-5D-3L
    - Lung function (LFQ)
    - Asthma control test (ACT)
    - Mini asthma QOL
    - Clinical COPD

Mean age = 37 years old
Many would be classified as OPDP

Is it feasible to undertake respiratory screening of PDP in a community clinic?

Study results

**LFQ scores suggested:**
- 79% had symptoms associated with increased risk of COPD

**Spirometry scores indicated:**
- 14% had potential COPD

**Of the those with pre-existing asthma, ACT scores indicated:**
- 100% had poorly controlled asthma

Feedback from participants and staff indicated **willingness and capacity** to screen

Anchoring COPD screening to drug services

Spirometry was offered to current and former heroin and crack smokers when they collected their OST prescription.

- 73% of population participated ($n = 807$)
- 47% had airflow obstruction consistent with COPD ($n = 379$)
  - 21% had severe or very severe COPD

96% of respondents were happy with the process.

93% were willing to attend future COPD appointments at drug centres.
Psychosocial comorbidities are more prevalent in OPDP

- Depression 95%
- Anxiety 89%
- Living alone 79%

Premature death of peers
Decreases social network and may exacerbate psychosocial morbidities

Withdrawal from society and drug scene
May do so as a protective measure and become ‘the marginal among the marginal of society’

Stigma
Increases isolation and social exclusion

Why does this matter?

**Loneliness and isolation**
Significant risk factors for adverse health outcomes
- Social isolation has been significantly associated with increased mortality (hazard ratio 1.26)

**Shame and fear of stigma**
Can be barriers to seeking help such as OST and treatment of comorbidities

To contact and engage OPDP
Employment, finance, housing and care
Specialised nursing homes, men’s shed programmes

**What to consider?**
- Assertive outreach models
- Wider aspects of support
- Alternative models of care

Alternative models of care

Specialised nursing homes

• Operate in Denmark, Germany and Netherlands
• Mainly pilot projects but could serve as useful models
• Can be difficult to accommodate OPDP in traditional nursing homes
• Aims to cater for OPDP no longer capable of self-care with specially trained staff
• However, may increase stigmatisation and exclusion from community

Men’s shed programmes

• Operate in Australia, Canada, Ireland and the UK
• Older men come together, socialise and learn new skills
• Helps tackle loneliness and isolation
• Can be recommended to OPDP
  - Men recovering from drug addiction have reported it to play an important role in their recovery

Primary care in-reach model: promising intervention in London

At risk homeless patients identified in hospital

Holistic health assessments carried out by multidisciplinary team (GP, nurse, housing, third sector support etc.)

Patient supported both in hospital and once discharged based on assessment

An integrated, multidisciplinary approach and referral between specialised and mainstream health and social services is vital to address the needs of OPDP

OST key considerations in OPDP

- Tailor access, retention and follow-up
- Do not pressure to withdraw
  - OST is a protective factor against overdose
- Transitioning between OST options may be necessary
  - Poor response to treatment, patient preferences, drug–drug interactions (DDIs)
- Presence of comorbidities and emergent comorbidities
  - Be vigilant of DDIs
  - Consider buprenorphine if respiratory comorbidities (less respiratory depression)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Overdose mortality In treatment (1000 person years)</th>
<th>Overdose mortality Out of treatment (1000 person years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone</td>
<td>2.6</td>
<td>12.7</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>1.4</td>
<td>4.6</td>
</tr>
</tbody>
</table>
Heroin-assisted treatment (HAT)

- Findings suggest that long-term HAT is an effective treatment for chronic heroin addicts who fail to benefit from traditional OST (methadone or buprenorphine)

In one study chronic, treatment-resistant heroin-dependent patients offered long-term HAT and outcomes monitored over a 4-year period:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline (n = 149, 100%)</th>
<th>After 1 year of HAT (n = 147, 98%)</th>
<th>After 4 years of HAT (n = 83, 56%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence of physical health problems (MAP-HSS &lt;8)</td>
<td>30.1%</td>
<td>77.1%</td>
<td>81.5%</td>
</tr>
<tr>
<td>Absence of psychiatric health problems (SCL-90 &lt;41 in males and &lt;60 in females)</td>
<td>42.2%</td>
<td>77.1%</td>
<td>87.7%</td>
</tr>
<tr>
<td>No illicit heroin use</td>
<td>0%</td>
<td>57.8%</td>
<td>86.4%</td>
</tr>
<tr>
<td>No cocaine use</td>
<td>21.7%</td>
<td>27.7%</td>
<td>53.1%</td>
</tr>
<tr>
<td>No excessive alcohol consumption (≥5 glasses)</td>
<td>63.9%</td>
<td>71.1%</td>
<td>77.8%</td>
</tr>
</tbody>
</table>

Continued HAT treatment was associated with an increasing proportion of patients without health problems and substance abuse.

**DDIs in OST**

- Highly relevant for OPDP due to high burden of co-morbidities
- Methadone and buprenorphine are extensively metabolised by cytochrome P450 enzymes – especially CYP3A4 – as are many other medications

**DDIs can lead to:**
- Opioid withdrawal
- Opioid toxicity
- Non-adherence

**It is important to:**
- Be aware of patients’ comorbidities and other medications
- Understand potential DDIs
- Optimally match OST to patient

**Cytochrome P450 system**
- Inducers
- Inhibitors

Examples of DDIs in OST

<table>
<thead>
<tr>
<th>Medication</th>
<th>Medication class</th>
<th>Methadone exposure</th>
<th>Buprenorphine exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efavirenz, nevirapine</td>
<td>HIV medication</td>
<td>Decreases</td>
<td>May decrease</td>
</tr>
<tr>
<td>Rifampicin</td>
<td>Antibiotic</td>
<td>May decrease</td>
<td>May decrease</td>
</tr>
<tr>
<td>Fluconazole, voriconazole</td>
<td>Antifungal</td>
<td>May increase</td>
<td>May increase</td>
</tr>
<tr>
<td>Phenobarbital, phenytoin, carbamazepine</td>
<td>Antiepileptic</td>
<td>Decreases</td>
<td>May decrease</td>
</tr>
<tr>
<td>Fluvoxamine</td>
<td>Antidepressant</td>
<td>May increase</td>
<td>No significant interactions recorded to date</td>
</tr>
<tr>
<td>St. John’s Wort</td>
<td>Purported to be antidepressant</td>
<td>Decreases</td>
<td>Decreases</td>
</tr>
</tbody>
</table>

Many publications and resources to check potential DDIs:
BNF, Liverpool HEP Interactions

Note: always check each individual drug for up-to-date DDIs

Case example

• 61-year-old male
• COPD: has recurrent exacerbations and hospital attendances. Currently using oxygen
• Other comorbidities: diabetic, mobility issues
• Low levels of alcohol consumption
• Methadone low dose daily. Stable for a number of years
Case example

• 61-year-old male
• COPD: has recurrent exacerbations and hospital attendances. Currently using oxygen
• Other comorbidities: diabetic, mobility issues
• Low levels of alcohol consumption
• Methadone low dose daily. Stable for a number of years
• Currently starting to reduce methadone dose
• Considering transition to buprenorphine
Practical recommendations

- Increase and improve screening for age-related conditions
- Use an integrated multidisciplinary approach
- Listen to and involve OPDP in decision-making
- Tailor treatment goals to patient
- Do not pressure to withdraw from OST
- Consider DDIs when prescribing and monitoring OST
- Develop supportive programmes to reduce isolation and loneliness
- Consider assertive outreach programmes for patients not engaging
- Consider alternative models of care for OPDP
- Increase awareness and training of staff involved with OPDP
- Introduce disease preventative options (e.g. influenza vaccinations)
- Provide a staff of mixed skill set in treatment
Conclusion

• OPDP is a growing population with complex needs
• Early diagnosis of comorbidities is essential to reduce long-term complications and the burden on future healthcare
• Personalising treatment to the individual is vital
• Important to make links with other health services
  – Respiratory clinics, pain services, etc.
• Need to consider new models of working with and treating this population