The 2011 European conference report was made possible as part of the ongoing educational commitment of Reckitt Benckiser Pharmaceuticals (RBP) to support healthcare professionals treating opioid dependence. The views expressed in this report reflect the opinions and clinical judgement of the speakers.

Introduction

The 13th annual ISAM meeting was held on 6–10 September 2011 at the Radisson Blu Scandinavia Hotel Oslo, Norway, while Global Addiction 2011, incorporating the 6th European Association of Addiction Therapy (EAAT) congress, was held on 5–7 December 2011 at the Portuguese Catholic University in Lisbon, Portugal. International experts gathered to present and discuss the latest medical research into addiction medicine, and to learn from different management approaches around the world. This report summarises some of the key presentations on opioid addiction and the available therapeutic options, with a focus on international experiences to date with medication-assisted treatment (MAT).

Noticeable differences in the standard of care for opioid-dependent patients across Europe were reported as a significant problem, especially for access to treatment, continuity of care in prison, primary care integration and dosing (pages 2–5). In addition, strict treatment rules such as daily supervision and weekly urine drug screens were posed as significant barriers to treatment access. Speakers agreed that country-specific treatment policies impact patients in a negative way, through the promotion of non-evidence-based care over well-researched interventions. Politics was shown to play a key role in the development of treatment systems, which often focuses on the wellbeing of society rather than the wellbeing of the patient.

Speakers reported that integration of primary care with addiction medicine services is an effective and necessary solution for increasing the uptake and quality of treatment services, with excellent results obtained with provision of primary healthcare in needle and syringe programmes. Significant problems with treatment access for HIV and hepatitis C services were shown as widespread, which could be addressed through integration of services providing MAT (pages 6–7).

Encouraging research was presented showing that providing MAT improves outcomes provided that therapeutic doses and misuse-prevention strategies are employed, the latter to reduce the likelihood of misuse and diversion (pages 8–10). Study findings also confirmed the feasibility of buprenorphine/naloxone (bup/nx) as first-line therapy, showing that switching from other pharmacotherapies is well-tolerated and assists patients in their road to recovery. Recovery was placed at the forefront of the treatment agenda, with a number of studies showing the beneficial effects of buprenorphine-based therapy in reaching this endpoint. Flexible treatment was shown as a feasible option with buprenorphine and buprenorphine/naloxone (bup/nx) pharmacotherapy, offering good retention rates while increasing access to treatment (pages 11–15).

Speakers agreed that long-term maintenance strategies with effective pharmacotherapy following a structured approach are key to a successful recovery, as shown by high rates of adverse outcomes with early treatment discontinuation (pages 16–18). Furthermore, personalised treatment was described as the future of addiction medicine, through the targeting of key neurobiological circuits implicated in addiction disorders, although dopamine was shown to not play as significant a role in opioid dependence as previously thought (pages 19–20).
Drug policy and treatment access

Referring national policy: the key to standardising care?

Findings presented at Global Addiction showed that significant differences in the standards of care for opioid-dependent individuals exist between countries in Europe, demonstrating an urgent need for standardisation of treatment delivery systems along the lines of those for other chronic diseases. This situation is often complicated by governments’ health policies, which often prioritize societal wellbeing in favour of patient health. Preliminary findings from the European Quality Audit of Opioid Treatment (EUROPA) study presented by Dr João Guiló confirmed significant differences in patient demographics, physical and mental health, comorbidities, drug use and treatment access across Europe, suggesting an urgent need for the standardisation of treatment delivery systems. It was explained that differences exist across Europe in terms of the availability and ease of access to treatment, participation of general practitioners in treatment delivery, utilisation of a range of pharmacotherapies, equality and continuity of patient care. In addition, significant variations are present for medication dose, requirements for supervised dosing, levels of diversion and misuse, and appropriate training and education for out of treatment drug users. “Better understanding of between-country differences in treatment delivery and outcomes would inform how government policy is made, with the goal of optimising treatment benefits”, said Dr Guiló. The complete EUROPA 2.0 study includes 900 physicians, 2,600 patients and 1,100 out of treatment opioid users across 11 European countries will be published in early 2013.

The EQUATOR study

To assess treatment perspectives from physicians who treat opioid-dependent patients both out of treatment, Guisao and others in the studied countries administered a survey to physicians involving telephone or face-to-face interviews, as well as questionnaires to patients in Italy, Portugal, Germany, Austria, Greece, France, Denmark, Norway, Sweden, Switzerland and the UK. The research was modelled on the 2009 IMPROVE study presented by Dr Heino Stöver, and topics addressed included prison treatment practices (ease of access, therapeutic, medication, doses, counselling, regulations and guidance), patients’ clinical experiences (satisfaction, barriers to treatment entry and retention), clinical and public health outcomes (drug use, treatment retention, misuse and diversion), and demographic characteristics of users and patients. In addition to a core set of questions common to all surveys, some individual studies included additional questions specific to the local environment. The EQUATOR study is one of the largest studies in Europe to date in understanding treatment quality and barriers to treatment access, thus providing a unique and powerful data set that will help address some of the gaps in treatment across countries. As with the majority of studies, Guisao noted that the employed methodology survey methodology could be associated with potential biases in terms of achieving a representative sample and reliance on self-reported data.

Between-country differences in treatment: a call for integrated health policy

Preliminary study findings from the European Quality Audit of Opioid Treatment (EQUATOR) study presented by Dr João Guiló confirmed significant differences in patient demographics, physical and mental health, comorbidities, drug use and treatment access across Europe, suggesting an urgent need for the

What efforts are being made to look at the quality of MAT from the perspective of additional drug use, such as benzodiazepines and alcohol?

A. Psychiatric comorbidities are often undiagnosed, which is directly related to increased rates of benzodiazepine and alcohol use. There is a need of putting addiction medicine into medical and social care so treatment can be more accessible, although specialist psychiatric help should be available as well. The Australian model is a good example of an integrated approach to addiction medicine. Addiction is much more a dependency–more, and we need to look at the reasons why patients are using other drugs on top. This may be linked to the practice of underdosing in Europe, with doses of 14–16 mg/day often common practice for buprenorphine and bupta. These doses are far too low and also have implications for benzodiazepines and alcohol.

B. It is interesting to see how HIV and hepatitis C prevalences across countries vary as a result of drug policy. In the UK, there is a very low HIV rate that can be attributed to the introduction of needle and syringe programmes before HIV was introduced. Portugal’s figures remain substantial, but are encouraging, given the reduction from 65% when there was no integrated treatment to 20–30%. It would also like to know if there is any specific reason for the low rates of employment seen in the UK?

We do not have such information available as of yet. However, we would like to have greater attention drawn to Eastern European countries where patients in treatment had a lower risk. When specific pharmacotherapies were compared, bupta was associated with the lowest rate of on top drug use for heroin, opioids and other drugs. Indeed, concurrent consumption of drugs was higher among those outside of treatment, thus confirming the protective effect of MAT.

Findings with reaching implications

Preliminary analyses of completed findings from six of the included countries was presented in an interactive panel discussion with Dr Heino Stöver and Prof Gabriele Fischer. Worryingly, it was noted that prison was shown to vary greatly across Europe, with treatment frequently being disconnected or changed to low levels in order to get patients into prison. Opioid users outside of treatment were more likely to report treatment discontinuation upon prison entry than patients, raising the question of whether stopping treatment contributes to a return to drug use. The findings from the IMPROVE study showed that in treatment was associated with a reduced likelihood of imprisonment. The results are of importance, given that approximately 0.5 million opioid dependent individuals go through the prison system annually. Fischer communicated an encouraging situation in Austria where drug policy has changed and education is provided for all individuals working in prisons, with a range of pharmacotherapies routinely offered for those who require it.

Demographic considerations

Variability in patient demographics was observed among countries, with age, employment status, and mental health, and self-reported HIV and hepatitis C status showing the greatest variability. Speakers agreed that age and gender specific treatment services are needed to address the variability across countries. The higher incidence of opioid dependence among individuals aged 50–59 years in Portugal was explained by Stöver to be due to a considerable increase in young to older age groups and fewer young patients taking heroin use. Conversely, Fischer said that the higher number of younger patients in Austria is most likely a result of greater treatment access through general practitioners; thus allowing for earlier detection and intervention. Opiates in treatment were found to be significantly older, less likely to be single and to have been in prison compared with those outside of treatment. Rates of overdose were also shown as significantly different between countries, although patients in treatment had a lower risk. When specific pharmacotherapies were compared, bupta was associated with the lowest rate of on top drug use for heroin, opioids and other drugs. Indeed, concurrent consumption of drugs was higher among those outside of treatment, thus confirming the protective effect of MAT.

Addressing treatment gaps through informed policy change: findings from the IMPROVE study

Significant barriers to treatment access in the general community and within prisons continue to exist, showed findings from the 2009 IMPROVE study presented by Dr Heino Stöver. Attention was drawn to the large gaps in provision of treatment, where patient numbers have increased exponentially while the number of active prescribing physicians remains the same (Figure 1). Data were presented showing that 32.4% of authorised physicians never provide MAT and 35.3% discontinue prescribing. Reasons given for lack of MAT prescribing were shown to be linked to several unavoidable obstacles that medications misuse and diversion occurs, lack of governmental funding, law and order, juridical consequences, increasing comorbidity, the remuneration of patients and mental health professional care appointments that are mandatory for patients wishing to continue receiving MAT. “In this context, psychosocial care is a more or a barrier to commencing or continuing MAT than a tool of retention”, said Stöver.

Barriers to treatment access

In light of these findings, Stöver and colleagues launched the IMPROVE study, which aimed to obtain a better understanding of the barriers to treatment access, retention and quality. In total, 400 opioid dependent patients out of treatment and in treatment, and 152 treatment and non-treatment accepted physicians were surveyed. Findings showed that MAT access and provision were inadequate, especially outside major cities. Patients reported high levels of difficulties in accessing treatment, with only 38% of physicians stating that access to MAT in their area was easy or very easy. The most significant barriers restricting patients from entering treatment included strict treatment rules (eg urine testing, daily supervision, mandatory pre-treatment) and absence of treatment continuity, lack of treatment physicians and related waiting lists for entering a treatment programme. Improvements in the regulatory framework and required conditions for MAT could therefore encourage more physicians to provide treatment and increase treatment access. The study also demonstrated that patients who have been previously discharged from treatment are more likely to be readmitted to treatment and if readmitted to be more likely to continue in treatment.

Despite general practitioners with 50 hours of addiction medicine training being able to provide MAT, a significant proportion of these physicians often stop prescribing after 5 years, which is most likely a result of the continuing stigma attached to MAT. Dr Heino Stöver explained that the problem is compounded by the large gaps in provision of treatment, where patient numbers have increased exponentially while the number of active prescribing physicians remains the same (Figure 1). Data were presented showing that 32.4% of authorised physicians never provide MAT and 35.3% discontinue prescribing. Reasons given for lack of MAT prescribing were shown to be linked to several unavoidable obstacles that medications misuse and diversion occurs, lack of governmental funding, law and order, juridical consequences, increasing comorbidity, the remuneration of patients and mental health professional care appointments that are mandatory for patients wishing to continue receiving MAT. “In this context, psychosocial care is a more or a barrier to commencing or continuing MAT than a tool of retention”, said Stöver.

Dependent patients versus active treatment providers in Germany

Figure 1. Number of opioid-dependent patients versus active treatment providers in Germany

During the presentation, Dr Chris Ford explained how the promotion of healthy drug policies is key to securing optimal patient outcomes through a model of integrated care. Country case studies were presented showing how research-based and patient focused policies while punitive treatment systems fail in the long term. Finally, Professor Mike Trace discussed how policies often influence the development of treatment systems and presented the key elements that make up an effective system.

By providing patients and communities with active and informed medical care, punitive measures and to treat opioid-related disorders as a medical condition rather than a criminal offence. Treatment systems fail in the long term. Finally, Professor Mike Trace discussed how policies often influence the development of treatment systems and presented the key elements that make up an effective system.

National policy impacts treatment provision through its influence on the modelling of treatment systems, with non-evidence-based care often being promoted in favor of well researched interventions. During her presentation, Dr Chris Ford explained how the promotion of healthy drug policies is key to securing optimal patient outcomes through a model of integrated care. Country case studies were presented showing how research-based and patient focused policies while punitive treatment systems fail in the long term. Finally, Professor Mike Trace discussed how policies often influence the development of treatment systems and presented the key elements that make up an effective system.

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Drug policy and treatment access

Crucial for greater physician support and training, and greater integration of prison and community healthcare services to address these issues.

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<p><strong>Employment</strong><br/>A significant difference in employment rates was seen between countries with high and low levels of drug policy, showing the highest employment rates. Gauld noted that the observations for Portugal were most likely a result of reductions in stigma associated with the decriminalisation of drug use and increasingly positive attitudes towards employment of drug addicts. Findings also showed that patients in treatment were on average three fold more likely to be employed than those outside of treatment. The agenda encouraged findings. Silver noted that they were missed in the context of individual take-home country policies, as they will often ultimately impact rates of employment during daily supervision as a barrier to employment.</p>

<p><strong>Physical and mental health</strong><br/>Analysis of health problems experienced by patients in and out of treatment showed a very high rate of psychological problems that was comparable between patients. Hepatitis C was also a significant issue for both groups. Gauld noted that they must be analysed in the context of individual take-home country policies, as they will often ultimately impact rates of employment during daily supervision as a barrier to employment. Findings also showed that HIV incidence was generally very low among all countries apart from Portugal, which showed a six time higher rate that other countries. Gauld told delegates that these figures are indeed an accurate reflection of the situation in Portugal, although this is a marked improvement among injecting drug users based on the initial situation. Furthermore, mental and physical health was rated as good or very good by a significantly higher percentage of patients on bup/nx compared with methadone or buprenorphine alone. Rates of infectious, neurological and cardiovascular diseases were also significantly lower among bup/nx-treated patients. Gauld noted that the findings should be interpreted with caution as bup/nx is unlikely to be prescribed to more stable patients, which may account for these observations.</p>

<p><strong>Dr Chris Ford</strong><br/>**IEHDP**<br/>London, UK</p>

<p><strong>Reforming drug policies through promotion of evidence-based care</strong><br/>There is a serious need to promote healthy drug policies to improve drug treatment for those with drug problems. “We do not have to be in drug policy reform to improve care of people who use drugs,” said Dr Chris Ford. Research showed that national drug policy directly affects patients, mostly in negative ways, through promotion of punitive, opinion-based treatment systems. “It is time for a balanced, integrated policy that is based on evidence rather than opinion,” said Ford. Good evidence-based treatment puts patients at the forefront, by providing harm reduction, MAT, psychological interventions, rehabilitation, reintegration and general health promotion. “Delegates were told that drug policy is particularly vulnerable to political influence that has little to do with evidence-based medicine, probably more so than any other area of health: “It is important to identify the challenges and the change in which it is happening,” said Ford.</p>

<p><strong>Physician involvement</strong><br/>The International Doctors for Healthy Drug Policies (IDHDP), aims to increase the participation of medical doctors in drug policy reform and bridge the gap between evidence-based practice and drug policy in countries that need it. IDHDP now has members in 10 countries and puts a key emphasis on an international lobbying campaign to change different treatment systems through promotion of harm reduction and healthy drug policies. Questionnaire findings from IDHDP members across 17 countries showed that all respondents felt that drug treatment systems are affected by their national drug policy mostly in a negative way, due to drug policy promoting evidence-based medical treatment. Despite the wide range of surveyed countries, many reported significant differences in how government intervenes and how changes in government impact programmes in improving policy by experience in practice. Ford also stressed that evidence showed that punitive drug policies did not reduce the amount of drug use, but rather increased it at times and always resulted in poorer health of drug users in these countries.</p>

<p><strong>Promoting healthy drug policies</strong><br/>An integrated package addressing prevention, supply and development of a comprehensive and realistic treatment system providing harm reduction (MAT and needle-exchange programmes) and needle retention is key for securing a healthy drug policy. Furthermore, it is necessary to have a balanced, integrated policy that is based on evidence rather than opinion. Good evidence-based treatment puts patients at the forefront, by providing harm reduction, MAT, psychological interventions, rehabilitation, reintegration and general health promotion. “Delegates were told that drug policy is particularly vulnerable to political influence that has little to do with evidence-based medicine, probably more so than any other area of health: “It is important to identify the challenges and the change in which it is happening,” said Ford.</p>

<p><strong>Evaluation of treatment</strong><br/>When to terminate treatment<br/>The decision to discontinue therapy is one that should not be made lightly, and extremes still exist when determining the ultimate endpoint of treatment. Gauld told delegates that systems like the one in Russia work on the premise of identifying patients who are not going to respond to treatment and do not offer the possibility of ongoing treatment beyond a certain period. Not encouraging or believing that patients can fully recover can result in a group of patients who neither intend or attempt to progress towards abstinence. “Defining the endpoints of treatment has many political implications, as they impact society on many different levels (eg discontinuing pharmacotherapy, not curtailing crime, getting talking to work and benefits). When we are so focused as practitioners on getting our model right, getting our service provision right, it is important to take a step back and not only think about what project or model we want to know, but think the treatment system as a service,” concluded Trace.</p>

<p><strong>Professor Mike Trace</strong><br/>International Drug Policy Consortium<br/>London, UK</p>

<p><strong>Political agendas and treatment systems: development; a cause for concern</strong><br/>Professor Mike Trace discussed optimal models for treatment systems and how they vary according to the right policies”, said Ford. Echoing views from Professor Mike Trace, Ford said that putting patients into drug detention centres and continuing to treat patients “is barbaric” and that doctors should campaign to close these centres. “Good evidence-based treatment for people who use drugs in a healthy integrated drug policy world”, concluded Ford, adding that “doctors need step up as leaders to influence policy in their own country”.</p>

<p><strong>Shining examples of success</strong><br/>Attention was drawn to Switzerland and Portugal, where changes in drug policy have resulted in positive outcomes. Implementation of a ‘four pillars’ approach integrating policing, harm reduction, and prevention and treatment in Switzerland has resulted in a greater than 50% decrease in drug related deaths between 1991 and 2004, with an eight fold decrease in HIV infections over a 10 year period. “In Portugal we have experienced a 90% reduction in property crime committed by drug users, with 15% of injecting drug users now receiving treatment”, concluded Ford. “Dramatic decrease in drug use in Portugal has resulted in significant decreases in street overdose, from 300 to 260 annually, and significantly reduced illicit drug use among 15–19 year olds since 2003.”<br/>When you decriminalise drug use, young people have open discussions about them and can make informed decisions – pushing the war on drugs is actually making things worse,” said Ford. Importantly, a significant increase in the number of patients receiving treatment has occurred, from 6,000 in 1999 to over 24,000 in 2003, whether you are waiting for an appointment to get in drug use.”<br/>The number of individuals injecting heroin has also significantly decreased from 45% to 17%, with injecting drug users now accounting for 32% of Portugal’s HIV cases compared with 56% before decriminalisation. Ford told delegates that decriminalisation alone does not work. But there are also emotional and psychiatric mental health issues surrounding this: “taking a purely basied brain science approach one will miss these important issues. I would also like to emphasise the social aspect of addiction... you have to recognize the trauma and the pain that some individuals suffer or do not want to confront, and this is when individuals turn to addiction. People will react to their social context, so if you ignore what they are thinking then you are missing the whole point.”<br/>The United Nations has the official position on addiction as a “barbaric” and that doctors should campaign to close these centres. “Good evidence-based treatment for people who use drugs in a healthy integrated drug policy world”, concluded Ford, adding that “doctors need step up as leaders to influence policy in their own country”.</p>

<p><strong>A menu of treatment services</strong><br/>Trace told delegates that despite research establishing that pharmacotherapy is necessary for individuals with opioid dependence, restricting the health of all patients, and that certain treatment pathways may be more appropriate for some than others, further research will continue to challenge many of the assumptions that we make about addiction. “It is important to identify the clear evidence base on how to shape a treatment system. Clearly the correct approach to take is to talk about ‘menus of services’ and try to integrate these as best as possible,” he said. Research suggests that the setting in which treatment is provided is important, especially in the context of intensity. Individuals who are in prison often require high intensity treatments due to many more complex life situations, and provision of anything less is ineffective. Recent UK and US research suggests that the quality of the therapeutic relationship between the treatment provider and the patient is key to successful outcomes. “This seems to be the most important indicator of the quality of the services, namely the quality of the staff and how much a patient’s needs are met, and how much a patient will feel and receive these,” said Trace. Recovery is also a useful target to focus on in treatment, delegates were told, as long as one is not too prescriptive about what this means, should it be abstinence or an individual target.</p>

<p><strong>When to terminate treatment</strong><br/>The decision to discontinue therapy is one that should not be made lightly, and extremes still exist when determining the ultimate endpoint of treatment. Gauld told delegates that systems like the one in Russia work on the premise of identifying patients who are not going to respond to treatment and do not offer the possibility of ongoing treatment beyond a certain period. “When you decriminalise drug use, young people have open discussions about them and can make informed decisions – pushing the war on drugs is actually making things worse,” said Ford. Importantly, a significant increase in the number of patients receiving treatment has occurred, from 6,000 in 1999 to over 24,000 in 2003, whether you are waiting for an appointment to get in drug use.”<br/>The number of individuals injecting heroin has also significantly decreased from 45% to 17%, with injecting drug users now accounting for 32% of Portugal’s HIV cases compared with 56% before decriminalisation. Ford told delegates that decriminalisation alone does not work. But there are also emotional and psychiatric mental health issues surrounding this: “taking a purely basied brain science approach one will miss these important issues. I would also like to emphasise the social aspect of addiction... you have to recognize the trauma and the pain that some individuals suffer or do not want to confront, and this is when individuals turn to addiction. People will react to their social context, so if you ignore what they are thinking then you are missing the whole point.”<br/>The United Nations has the official position on addiction as a “barbaric” and that doctors should campaign to close these centres. “Good evidence-based treatment for people who use drugs in a healthy integrated drug policy world”, concluded Ford, adding that “doctors need step up as leaders to influence policy in their own country”.</p>

<p>Figure 2. Injecting drug users [IDUs] as a proportion of HIV cases in some countries with a high prevalence of injecting behavior. IDUs as share of total reported HIV cases IDUs as share of total number of people on antiretroviral therapy</p>
Integrating primary healthcare within needle and syringe programmes – an effective approach

Study findings presented by Dr Paul Haber showed that uptake of addiction treatment services can be increased without increasing cost by providing primary healthcare to injecting drug users (IDUs) attending needle and syringe programmes (NSPs) through a nurse-led low threshold primary health clinic. NSPs provide the opportunity of acting as a point of contact between the healthcare system and IDUs, and may therefore provide opportunistic primary healthcare for this group of marginalized patients who often report difficulty accessing treatment.

Focusing on patient needs

Haber noted study findings from a recent editorial, international experimental with IDU-targeted primary health clinics, which showed the importance of accessibility, flexible appointments, opening hours based on patient needs, confidentiality and cost-free services. In addition, clinical care should be offered on a principle of harm reduction and be able to accept that patients are often reluctant to receive conventional healthcare. Significant problems reported with such services are mainly financial issues with IDUs, and a lack of integration with the general sector of care, which could result in questionable service quality.

A nurse-led approach

To investigate the feasibility of a nurse-led low threshold primary care facility, Haber team aimed to define the patterns of service utilisation, drug use, risk behaviours and uptake of referrals made to other health and social services over a 4-year period. In this nurse-led clinic, both users requiring needles and those referred from other rehabilitation centres were provided access to primary healthcare within the clinic. A visiting doctor was available on a part-time basis to assist the nurse and review difficult cases and abnormal screening results. Clinical protocols were available for treating hepatitis C, and a number of services were available including referral, assessment, screening, management of sexually transmitted infections, violence, abusers, intimate counselling and welfare.

Positive outcomes

Study findings revealed a steady case load of both new patients and those coming back for treatment, with the majority (72%) requiring blood-borne virus testing and vaccination followed by drug health and psychosocial services (29%) and sexually transmitted diseases check-ups (16%). Patients attended the clinic on average 3.5 times, with 85% attending more than once. Furthermore, 62% of patients reported GP access to the clinic. Importantly, unpublished local data presented by Haber indicated that the main reason IDUs visited a GP was to “doctor shop” for drugs. One of the advantages of this clinic is that it is nurse-led so no prescriptions can be made,” said Haber. Further analysis showed that patients who reported benzodiazepine and benzodiazepine use in the preceding 12 months were 3.3 and 3.6 more likely than other patients to report GP access, respectively. Of the 249 patients offered hepatitis B vaccination, 50% completed the schedule, which according to Haber was not necessarily a negative finding given the study population. Analysis of 337 patient referrals for health and welfare services showed an average 50% uptake that was considered as an encouraging finding, and included referrals to a liver clinic (29%), GP (27%), usual health services (23%) and drug treatment services (13%). Contrarily, the data showed that in addition to reported patient benefits, the clinic is not designed to recruit new patients and provides the opportunity for continuation of care to this vulnerable patient population.

An effective approach

Findings from various studies integrating primary care into addiction treatment were presented, which showed improvements in 12 month addiction severity outcomes that did not differ according to whether treatment was provided onsite or offsite. Furthermore, additional outcomes significantly reduced the percentage of patients using outpatient services (62% to 41%) for emergency room visits (47% to 23%) and hospital visits (42% to 17%). Study findings also showed that integrated treatment results in incremental cost savings of US $60 261 per abstinent patient despite being initially more expensive.

Addiction treatment in primary care

It was estimated that about 25% of primary care patients have problems with drug use or a diagnosed SUD, and this figure is often higher in HIV primary care settings. To reduce mortality and mortality related to these problems, detection and treatment within a primary care setting becomes essential,” said Bart. Despite numerous studies demonstrating the effectiveness of addiction treatment, screening and brief intervention in primary care settings, lack of knowledge in the diagnosis of addiction, unfavourability with treatment options, and fear of non-adherence or drug-drug interactions are cited as common barriers to integration. To overcome these barriers, several interactive web-based tools have been developed, as well as provision of PCSSs incorporating email and telephone support, online resources, direct line advice and cooperation with local medical societies. Specific training on naltrexone, acamprosate and methadone treatment is also provided for primary care physicians, with courses and practice websites available online of www.pcsob.org and www.pcsobprimarycare.org, respectively. Another useful tool available to physicians is Naloxone (opioid reversal drug) distribution, an online resource providing a simple screening test with advice on clinical decision making. Specific training on naltrexone, acamprosate and methadone treatment is also provided for primary care physicians, with courses and practice websites available online of www.pcsob.org and www.pcsobprimarycare.org, respectively. Another useful tool available to physicians is Naloxone (opioid reversal drug) distribution, an online resource providing a simple screening test with advice on clinical decision making.
Role of MAT in harm reduction

Addressing HIV and hepatitis C with buprenorphine treatment

Opiod-dependent patients infected with HIV and hepatitis C benefit from appropriate levels of care and often have difficulty accessing treatment. A suggested study findings presented at ISAM by Prof Frederick Alice and Dr Paul Haber. Integration of HIV treatment with MAT was shown as important, given that buprenorphine was reported to increase the likelihood of initiating and staying within antiretroviral therapy, achieving viral suppression and improving QoL and indicators of quality HIV care. Indeed, substitution treatment leads to non-detected levels to significantly reduce HIV transmission. A similar prospective picture was described by Dr Paul Haber, who drew attention to the high number of injecting drug users infected with hepatitis C and the problems in accessing treatment. Development of a partnership between clinicians was able to increase hepatitis C treatment access as treatment with buprenorphine, thus playing an important role in prevention of a future liver disease epidemic. Dr Robert Haining then presented study findings suggesting that integration of MAT within a safe injecting facility effectively increases treatment uptake.

Improving HIV outcomes with MAT

A number of studies were mentioned, all showing that MAT increases the likelihood of receiving and adhering to antiretroviral therapy, thereby achieving viral suppression among opioid-dependent HIV-infected participants. Recent preliminary study findings confirmed that discontinuation of MAT actually reverses this benefit. Alice explained that treatment integration is key to achieving positive outcomes, noting that the capability of primary care physicians in treating addiction should not be underestimated. A NSW study findings showed that buprenorphine increased the likelihood of initiating antiretroviral therapy (from 59.7% in treatment at 2 quarters vs 3 or 4 quarters) was associated with a 1.5-fold increased likelihood of receiving antiretroviral therapy.

HIV and prison

HIV outcomes following release from prison were shown as poor (Figure 5), but significantly improved following buprenorphine treatment in a 12-week follow-up study of 23 released HIV-positive patients. Opioid cravings decreased significantly within 3 days, with retention rates at 74%. Furthermore, viral load and CD4 counts remained constant, which “suggested for the first time that treating the OD actually engages patients in care for a longer period of time,” said Alice. He added that preliminary findings from an upcoming study show that retention on buprenorphine for 20 or 24 weeks was associated with a 5.6-fold increased likelihood of having a viral load below 50 at 6 months.

Factors linked to treatment

Prevalent analysis of this patient cohort showed that 49% of patients had never sought treatment for hepatitis C. Reasons cited for not taking up treatment were lack of knowledge about hepatitis C infection (30%), concerns about treatment side-effects (12%) and symptomatic disease (11%). However, the majority (65%) of patients were willing to receive antiretroviral treatment. Of the 66% of patients referred to a hepatitis C specialist, 44% attended their appointment. Of these, 10% initiated treatment. “We think this is an excellent result compared to usual care,” said Haber. Factors positively associated with hepatitis C treatment uptake included having a 2.3-fold greater prevalence at 1 month compared with 3-month follow-ups of patients who had ever received buprenorphine treatment (aOR=0.28 and 0.09, respectively). “Access to hepatitis C treatment is a matter of priority,” said Alice. He added that preliminary findings from an upcoming study show that retention on buprenorphine for 20 or 24 weeks was associated with a 5.6-fold increased likelihood of having a viral load below 50 at 6 months.
were not receiving treatment. Approximately 50% of these opioid-dependent individuals said they would be prepared to start MAT within the SIF. This programme, which started earlier this year, has so far resulted in 6 out of 11 patients referred to a specialised treatment centre from the SIF. The presented preliminary study findings showing that integrating MAT within a safe injecting facility (SIF) is effective for increasing treatment uptake. Supporting the concept of harm reduction in opioid-dependent users, Dr Robert Haemmig (University Psychiatric Services, Bern, Switzerland)

- Do physicians in Australia show any objections to treating patients on methadone maintenance and do you have any experience with the new protease inhibitors in patients on MAT?
- A. We do not have any experience with protease inhibitors among patients on MAT as this group of patients has been excluded from the initial trials of these agents. One of the challenges of getting hepatologists to do this work is that they are not always willing to work with drug users. However, more and more hepatologists are realising that there are serious liver problems among individuals with addiction and they are looking for strategies to link the patients into treatment. This has partly been driven by the high number of patients developing cirrhosis. It is much easier to treat patients at the early stages of the disease rather than waiting until advanced liver disease emerges.

5. Do patients show increased drug use when receiving hepatitis C treatment?
A. Findings from another Australian study show that this is not the case, despite 30% of patients experiencing depression that was successfully treated.

31.4%, respectively. At 8 months) and stimulants use (43.2% vs 18.4% (70.3% vs 36.8% at baseline; 51.4% vs 39.5% at 11.1%, respectively). The rate of housing problems was also significantly lower among those treated with bup/nx, while several measures of self-assessed health were significantly better among bup/nx-treated patients. Both treatments improved regularly of baseline, although it was noted that methadone-treated patients had more difficulty keeping a regular wake time compared with buprenorphine-maintained patients at 8 months (40.5% vs 23.7%). Alcohol use was reported to a similar extent in both groups, with comparable numbers of patients reporting no problems to alcohol problems. However, extreme drinking was observed only among methadone-maintained patients at 8.1% (27.0% vs 18.9%).

- Dr Neil McKeganey Centre for Drug Misuse Research, Glasgow, Scotland

**The role of buprenorphine/naloxone in recovery**

Opening his talk, Dr Neil McKeganey cited recovery as the priority at the forefront of treatment strategies within the UK, rather than an approach focused primarily on harm reduction. “The worry is that patients have then become dependent on the treatment services themselves,” he commented. Findings presented from a study of 1,500 opioid-dependent patients receiving bup/nx or methadone for at least 6 months showed that bup/nx-treated patients had significant progress in multiple clinical outcomes and showed better ageing of recovery than those maintained on methadone.

**Reducing illicit drug use**

Structural interviews among drug users, prescribers and pharmacists in Scotland performed at baseline, 1 month and 6 months showed that 60% of patients treated with methadone reported injection drug use compared with 30% of bup/nx-treated patients. Bup/nx-treated patients also reported higher scores on a readiness to treat measure than those maintained on methadone. Compared with bup/nx, methadone was associated with higher baseline and 6-month follow-up rates of illicit drug use (70.1% vs 34.2% at baseline; 42.2% vs 31.6% at 6 months), neurocognition (70.3% vs 36.6% at baseline; 51.4% vs 39.3% at 8 months) and stimulants use (43.2% vs 18.4% at baseline; 50.1% vs 7.0% at 11.1 months). When patients’ self-assessment of problem drug use was analysed, nearly double the number of patients in the bup/nx group reported having no “problem” drug use compared with those on methadone, at 60.5% versus 31.4%, respectively.

**Improving outcomes and facilitating recovery with buprenorphine**

Therapies incorporating buprenorphine or bup/nx play a key role in improving treatment outcomes, promoting recovery and increasing access to treatment. A number of studies examining the benefits of MAT have been presented at ISAM. Dr Neil McKeganey showcased data suggesting that bup/nx plays an important role in recovery as it is associated with greater reductions in illicit drug use and improved QoL compared with methadone. Findings from the Buprenorphine and Naloxone (BUP/NA) study presented by Prof Patrick O’Connor also showed that bup/nx is an effective therapeutic modality for HIV–opioid-dependent patients, who improves treatment retention, reduced drug use, fewer drug-drug interactions and an increased likelihood of entering treatment compared with methadone. Dr 2v Carr and Dr James Finch also presented their experience of take-home buprenorphine and bup/nx treatment, reporting successful outcomes and reduced drug use, even with minimal psychosocial intervention. Indeed, take-home buprenorphine was posed as an option for limited accessibility to treatment while offering good retention rates.

**An issue of cost**

McKeganey explained that bup/nx is not as widely available as one might think, and that a reason for this may be its high cost. “It’s very easy to do a simple costing exercise and say that one drug is more expensive than another, but when you start to look at the positive changes associated with its use coupled with how widely it is prescribed, there are clearly issues of the relative cost here that need more detailed consideration,” he said.
A positive experience

Dr Ziv Carmel
Tel-Aviv, Israel

Improving treatment access with take-home buprenorphine

Study findings presented by Dr Ziv Carmel suggest that take-home buprenorphine maintenance with minimal psychosocial interventions is an effective treatment option, which increases access to MAT while providing comparable reduction rates to those observed in intensive treatment settings. Although minimal psychosocial intervention is not an ideal setting for long-term treatment, ongoing treatment with take-home buprenorphine can be effective as a means of reducing toxicology screens seen with bup/nx, most of which occurred during initial treatment stages (Figure 8). ‘Often, the last drug screen positive for opioids was the one taken at admission. Clinically, it is just as amazing to see a medication that within days can turn around drug-using behavior,’ he said.

Limited accessibility — a widespread problem

Opening his presentation, Carmel explained that in Israel, there is limited accessibility to buprenorphine maintenance treatment in government-funded centers, in addition to a small number of private clinics offering opioid-dependence treatment. Comprehensive psychosocial interventions are integral to a form of treatment in these clinics; however, this results in long waiting lists due to the strain on treatment resources. To address this issue, the team developed the Office-based Buprenorphine Maintenance Treatment with Minimal Psychosocial Intervention (OB-MPI) model, where admission to the clinic was performed by a physician, and followed by take-home buprenorphine induction and weekly attendance to the clinic during the first month and monthly thereafter. Psychosocial intake was performed within 1 month of admission and focused interventions were tailored according to patient findings, with psychotherapy offered on admission. Patients received physician follow-up once every 3 months, and psychiatric interventions were carried out when necessary.

Retaining patients with take-home

Results from the retrospective analysis of 238 patients admitted to the clinic in 2008 showed that 10.6% did not attend the clinic for a second visit. Drop out was found to be significantly higher among female compared to male patients, 24.0% versus 9.3. Carmel noted that patients who were self-medicating with buprenorphine were the most likely to drop out than those who did not self-medicate, at 0.0% versus 36.0%, respectively. Overall, 52.5% of patients who completed induction with buprenorphine were still in treatment after 12 months. The findings are encouraging, given that 87.3% of patients reported multiple substance abuse before or on admission. Furthermore, 24.6% and 49.1% of patients reported psychiatric and physical comorbidities at admission, respectively.

Factors associated with adherence

It was shown that patients who were single, previously self-medicated with buprenorphine, abused benzodiazepines and lived in close proximity to the clinic were significantly more likely to adhere to treatment than those who did not have these characteristics. Patients with a history of criminal activity were significantly more likely to also have a history of buprenorphine self-medication, and thus had better rates of adherence to treatment following adherence to the clinic.

What was the average buprenorphine use in the study and how do you monitor for misuse and diversion?

Patients received an average 16 mg of buprenorphine per day and regular urine screening was performed. However, it is possible that tampering of samples occurred.

Limited maintenance doses

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Mean opioid maintenance doses

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Dr Paolo Mezzelani
University of Verona
Italy

Positive physician, patient experiences with buprenorphine

Survey findings on Italian physicians’ experiences with buprenorphine, presented by Prof Paolo Mezzelani, revealed positive feedback on various aspects of treatment, including safety profile, ease of induction, long-term maintenance, take-home therapy and use with first-time and relapsed patients. In addition, buprenorphine was viewed positively by both family members and health workers. However, physicians reported concerns over the diversion and misuse potential of buprenorphine and the difficulties in withdrawing medication principally due to a lack of low-dose tablets. Therapeutic daily doses above 1.2 mg during maintenance treatment were regularly reported. Despite over one third of physicians following their own clinical experience rather than complying with national guidelines, ‘Because Italy is a country with a large number of patients in buprenorphine treatment, results from this survey could be useful to other geographic areas,’ said Mezzelani.

An Italian perspective

Describing the current situation in Italy, Mezzelani told delegates that approximately 180,000 drug users attend one of the available 544 publicly funded specialist centres, of which 106,000 receive agonist-maintenance treatment. The majority of patients receive methadone treatment, with 25% and 13% treated with buprenorphine and buprenorphine, respectively. Take-home treatment is commonly provided in 40–60% of cases. To assess buprenorphine prescription habits, Mezzelani and team administered a written questionnaire assessing safety, acceptability and efficacy of maintenance treatment to 305 randomly selected Italian physicians who had at least 6 months experience with buprenorphine prescribing in 2006.

Encouraging prescribing practices

Buprenorphine prescribing was highly rated by the majority of physicians, who reported feeling most comfortable prescribing buprenorphine to heroin users receiving treatment for the first time (EMA), and to patients who relapsed to heroin use (28%) than those in either opioids or cocaine addicts. When compared to buprenorphine from heroin or methadone, it was rated as significantly problematic by 40% and 70% of physicians, respectively, with an additional 74% reporting it as no difficulty.

Discussing the induction protocol, Carmel explained that the initial dose was administrated at the outpatient office followed by subsequent doses taken at home, although patients were not under direct observation as with earlier protocols. The lengths of prescrip- tions were then increased progressively to every 1 month depending on patient reliability and urine screening results. Carmel noted that bup/nx mean maintenance doses tended to decrease over time with increasing stability (Figure 6). This pattern was described as different from what had been seen with methadone, which had often tended to steadily increase. In total, 43% of patients continued in ongoing treatment with bup/nx, 7% of patients transferred to methadone treatment and 51% successfully withdrew from their medication voluntarily. Only 24% failed induction or dropped out of treatment. Carmel drew attention to the low number of positive drug screens seen with bup/nx, most of which occurred during initial treatment stages (Figure 8). ‘Often, the last drug screen positive for opioids was the one taken at admission. Clinically, it is just as amazing to see a medication that within days can turn around drug-using behavior,’ he said.

Integrating HIV care through bup/nx treatment

Discussing the positive impact bup/nx has had on treatment uptake in the USA, Prof Patrick O’Connor provided various study findings describing the benefits of bup/nx for the treatment of HIV infected opioid-dependent patients, and highlighted potential challenges in the integration of HIV and opioid-dependence treatment in primary care that need to be addressed. ‘The BH565 study showed that a very important way that bup/nx can be effectively integrated into HIV treatment and patients can do well in terms of important substance abuse outcomes,’ said O’Connor. The findings help shed light on problematic issues encountered when integrating groups of opioid-dependent patients with specific HIV co-morbidities, and confirm a lack of physician screening for HIV infection in the broader general population of patients on office-based treatment of opioid dependence.

Bup/nx in primary care

Delegates were told that in the USA bup/nx is widely prescribed, with prescriptions increasing exponentially since its introduction in 2002. Despite this increase, the overall proportion of prescribing physicians in primary care remains low, standing at about 12,000 out of the approximately 350,000 practicing primary care physicians. Although the overall proportion of prescribing physicians in primary care remains low, standing at about 12,000 out of the approximately 350,000 practicing primary care physicians, according to findings presented at Global Addiction. Dr Paolo Mezzelani showed that both patients and physicians reported positive experiences with buprenorphine, with the majority of physicians basing referrals to recommended therapeutic services between 12-24 mg/day. Professors Ian Mannsman revealed that buprenorphine treatment is especially beneficial for severely dependent patients with low GDS, but results in greater GDS compared with methadone. However, physicians reportedly expressed concerns over diversion and misuse, which were shown to be dependent on a number of patient-related factors. Encouraging findings from a CDA initiative presented by Professors Ian Mannsman revealed that educating physicians on misuse prevention strategies was effective for reducing negative clinical practices conducive to misuse and diversion, such as subtherapeutic dosing and incomplete assessment of withdrawal at intake. Finally, Dr Gary Tanner and Mr Duncan Hill reported positive experiences in using bup/nx as first-line therapy, showing that patients treated with buprenorphine had significantly less drug use than those referred to methadone programmes.

Benefits from buprenorphine treatment: retaining positive outcomes, addressing key issues

Treating patients with buprenorphine-based pharmacotherapies benefits both patients and physicians, provided that key issues such as appropriate patient selection, dosing to a therapeutic window, risk assessment of diversion and misuse are appropriately managed, according to findings presented at Global Addiction. Dr Paolo Mezzelani told delegates that approximately 180,000 drug users attend one of the available 544 publicly funded specialist centres, of which 106,000 receive agonist-maintenance treatment. The majority of patients receive methadone treatment, with 25% and 13% treated with buprenorphine and buprenorphine, respectively. Take-home treatment is commonly provided in 40–60% of cases. To assess buprenorphine prescription habits, Mezzelani and team administered a written questionnaire assessing safety, acceptability and efficacy of maintenance treatment to 305 randomly selected Italian physicians who had at least 6 months experience with buprenorphine prescribing in 2006.

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administration of take-home therapy. Indeed, physicians rated the ease of use in unsupervised treatment to be a winning factor for buprenorphine (30%), followed by the smaller risk of overdose (22%) and less associated stigma (17%), compared with methadone. Despite the reported ease of take-home therapy, the greatest disadvantage of buprenorphine treatment was its diversion potential (31%), followed by difficulty in medication withdrawal mainly as a result of a lack of low-dose tablets (26%). In total, 60% of physicians agreed that buprenorphine was well suited for treatment for periods lasting more than 6 months and at doses above 12 mg/day (62%). Indeed, the majority of physicians routinely prescribed low-dose tablets (28%) for their patients in practice. Despite this encouraging finding, only 27% of physicians used guidelines to inform their dosing practice, with 39% preferring clinical experience.

**Patient treatment benefits**

Mosey and team found that 44% of physicians reported increased compliance rates with buprenorphine relative to methadone, with 50% of patients regularly receiving buprenorphine. Furthermore, 70% of patients specifically addressed centres to receive buprenorphine treatment. Benefits were also observed by families who judged buprenorphine as a better treatment compared with methadone (82%), and by health workers who valued the option of providing buprenorphine (74%). These encouraging findings confirm the feasibility of buprenorphine treatment for both physicians and patients.

**Predictors for misuse**

Findings from a study of 307 opioid-dependent patients showed that younger patients aged 15–20 years were more likely to misuse their medication than those aged 21–25 and 26–30 years, respectively (67% vs 41% and 18%).

When patients gave their reasons for misuse, 35% attributed this to the management of withdrawal symptoms. A separate survey of 111 patients also revealed subtherapeutic dosing (30%) as a significant risk factor for intravenous use, while a previous history of intravenous drug use was predictive for intranasal medication misuse (36%).

**Outcomes of physician education**

Findings from a teaching CME course that taught clinical practice behaviours, pharmacology and legal knowledge to opioid treatment physicians showed that practice behaviours were improved and changes were sustained at 3-month follow up. For the study, emphasis was placed on comprehensive patient evaluations to ensure correct diagnosis on opioid dependence, including urine testing, consistent patient history, corroborating medical examination and use of the Clinical Opiate Withdrawal Scale at all times. In addition, Walsh noted that it is important that physicians understand the rationale for why patients must be in withdrawal, and why non-reassurance to initiate and screening protocol may result in enrolling pseudopatients. Indeed, findings from the study showed that education on pharmacology resulted in a significant 30% increase in the number of physicians initiating MAT. Only very minimal numbers of patients were present in 81–100% of their patients. Delegated were told that it was an additional useful practice for reducing the likelihood of misuse is discussing the harms and consequences associated with this practice, such as stroke, overdose and granuloma formation.
Best practice in opioid dependence

**Completion of long-term maintenance: the key to recovery**

Patients have a better chance of recovering from opioid dependence if they receive long-term maintenance with MAT, suggested study findings presented by a number of speakers at ISAM showing poor outcomes with early discontinuation. Dr Ivar Skeie and Prof Thomas Clausen presented data showing that patients who are both not in treatment and discontinue MAT have higher rates of mortality, drug-related somatic disease, crime and poorer QoL than those in treatment. Durations lasting less than 40 weeks were associated with higher rates of mortality after treatment compared with during no longer seen. Indeed, non-fatal overdoses were five patients discontinued treatment, these reductions were (64%), injection-related incidents (83%) and other compared with before treatment. Drug-related incidents were observed during treatment for non-fatal overdose acute/subacute somatic disease incidents. 5 years retrospective analysis of all hospital contact due to for the study, Skeie and his team performed a cohort of 200 patients also showed that improvements seen during MAT treatment were associated with associations of patients outside of MAT. Clinically, patients who have discontinued treatment reported worse QoL than when they were receiving treatment, which builds the case for long-term maintenance therapy with MAT. “When we first take patients into treatment, we should try to keep them there,” said Skeie.

**Factors associated with QoL**

In response to the study findings, a follow-up study investigating self-perceived QoL in relation to treatment stage was performed. Preliminary findings showed that patients reported significant improvements in physical and mental health and overall QoL during maintenance treatment compared with before entering treatment. These were mainly associated with improvements in social functioning. However, some patients reported reduced QoL during treatment, which was associated with a number of treatment-related factors. Importantly, patients who had discontinued treatment reported worse QoL than when they were receiving treatment, which builds the case for long-term maintenance therapy with MAT. “When we first take patients into treatment, we should try to keep them there,” said Skeie.

**Reducing drug-related disease incidents**

For the study, Skeie and his team performed a retrospective analysis of all hospital contact due to acute/subacute somatic disease incidents 5 years before, during and after MAT treatment among 200 opioid-dependent patients. Significant reductions in drug-related incidents were observed during treatment compared with before treatment for non-fatal overdose (64%), injection-related incidents (63%) and other drug-related incidents (31%) (Figure 5). However, once patients discontinued treatment, these reductions were no longer seen. Indeed, non-fatal overdoses were five times as frequent after treatment compared with during treatment and twice as likely before treatment. A similar pattern was observed for injection-related incidents, which were 1.4 times as frequent after and more than twice as likely before treatment. Other drug-related incidents increased 15-fold after versus during treatment and were 3-fold more likely after compared with before treatment. Non-drug related mortality increased during treatment, but this was explained as being most likely due to closer contact with health services.

**Improving outcomes**

A study of 3,221 patients initiating treatment with buprenorphine (average dose 16 mg) or methadone (average dose 110 mg) showed that 64% had continuous treatment, 16% had two or more multiple treatment episodes and 20% terminated treatment. The highest rates of mortality were seen among patients who left treatment, which was comparable to that seen before entering treatment. Importantly, the study showed that being in treatment was associated with a 50% reduction in mortality compared with being out of treatment (Figure 10). Prof Thomas Clausen also referred to study findings presented by Dr Ivar Skeie showing significant reductions in somatic drug-related incidents during MAT (Figure 5).

**A high-risk period**

Delegates were then shown recent study findings suggesting that the first month starting and discontinuing treatment are found to be high risk periods, which may outweigh the benefits of entering treatment with durations of less than 40 weeks. Findings from these studies suggest that clinicians need to remain vigilant during transition between treatment phases, and that patients who decide to terminate treatment must be informed of this high-risk period. “If we accept that there is a high risk of mortality at the beginning of treatment then we need to take care of the prolonged treatment”, said Clausen.

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Methadone impairments rehabilitation

Waal explained that methadone full-agreement properties mean that it produces a competing blockade at high doses but does not block the receptors as such. “This is important because if there is no effective blockade there can be no cure of possible abstinence in the opioid system, which also means that after long-term methadone maintenance you have the same level (or worse) of neuroadaptive problems at the end of treatment,” he said. Waal added that this happens to an extent with buprenorphine as also it stimulates the mu receptor, although there is an upper limit to the effect.

Long-term treatment and flexibility

Regardless of treating patients with a continuing care or rehabilitation model, Waal stressed that patients should be informed of better outcomes with long-term therapy. Importantly, physicians should not terminate treatment against a patient’s will as there has been shown to result in adverse outcomes. Patients should be allowed to decide when it is best to withdraw from treatment, and this choice should be planned in advance with support systems in place should coming back to treatment be necessary.

Take-home medication schedules could prove beneficial, as Waal explained that treatment programmes should be compatible with ordinary life in society, including the normalization of medication dispensing and providing a sense of empowerment to patients.

Dr Lorenzo Somaini
Health Local Unit Biella
Cossato, Italy

Abstinence-oriented short-term treatment – an ineffective approach

Long-term treatment delivers significantly better outcomes from abstinence-oriented therapies, said Dr Lorenzo Somaini in his review of the literature investigating both types of treatment. Numerous studies support the role of long-term pharmacotherapy in the treatment of opioid dependence, showing that it decreases illicit use, morbidity and mortality, HIV infection risk, illegal activities and promotes overall functioning. Indeed, MAT creates a ‘window of opportunity’ during which patients can receive psychosocial interventions to reduce the risk for relapse.

Previous studies support maintenance therapy lasting a minimum of 3 months in order to see results supporting the concept that time in treatment and successful completion of treatment result in better outcomes.14,15 However, choice of MAT is important as some patients are unable to achieve normative levels of psychosocial functioning with methadone. This result has led to promotion of time-limited MAT in some countries, leading to the question of whether all patients require life-long treatment.

A review of six studies investigating time-limited MAT treatment programmes showed that the majority of patients required autonomous treatment at high rates of relapse were observed with this approach.16,17 Conversely, studies of planned detoxification following a stabilization period showed significantly improved outcomes, with fewer patients returning for treatment.18,19 Study findings showing high levels of abstinence-oriented therapies among treatment centres in Italy (49.7%) and re-treated (45.3%) patients also confirmed their lack of effectiveness, as 50% of patients dropped off treatment after 101 days compared with after 307 days with maintenance therapy.20 Somaini concluded that a major challenge lies in delivering existing treatments more effectively.

A number of delegates reported their clinical experiences with treatment, with one delegate stating that in his clinic patients are given the freedom to initially decide how their treatment should progress. Over a 4-year period, patients were able to withdraw successfully from treatment after 1 year, with 25% of patients previously unable to withdraw from methadone being able to withdraw after switching to buprenorphine. Another delegate explained that patients seem to initially want to stay on treatment for a short period of time, but after 2 years on maintenance many seem reluctant to withdraw from their medication. It was said that it is indeed difficult to navigate the correct balance between pushing patients to stop and letting them stay on treatment for too long.

A comment on deleagtes’ experiences, Somaini said that when considering termination of treatment, it is important to bear in mind that many patients suffer from dual-diagnosis. Patients who cannot withdraw from treatment often have comorbid mental health disorders that make discontinuing treatment problematic. If treatment is discontinued, then for general patients, they will most likely be at a high risk for relapse.

An integrated model of addiction

Addiction is a complex disorder, with multiple neurological and psychological constructs mediating its development. Targeting these processes provides the opportunity for developing new treatments and enables the possibility of selecting treating different aspects of addiction. A number of neurotransmitters are involved in the development of addiction disorders, which individually affect processes implicated in their progression. Figure 11: Nutt bold delegates that an important propagator of addiction is withdrawal, which is directly related to the duration of action and the dose of the administered drug. In addiction, one of the major variables in terms of the genotoxic predisposition of drug use is the rate of drug clearance by the CYP450 system. “Accelerated clearance leads to greater dependence because after withdrawal there is more drug, occurring, leading to greater drug use,” said Nutt. This can be reflected by the cyclical pattern of heroin use, which is directly related to its short half life. Pharmacotherapy, such as buprenorphine or methadone, which has slower kinetics than heroin due to differences in formal route and route of administration, reduces the chaotic effects of opioids and blocks on top use by restoring regularity.
Endorphins and addiction

Endogenous opioids play an important role in the process of addiction, with imaging studies showing increases in opioid receptors in the brain in 15% among opioid-dependent patients in withdrawal. Nutt also said that it is possible that different dopamine phenotypes exist, with individuals who have lower levels of dopamine receptors more likely to engage in addictive behaviors as a result of the increased pleasure derived from stimulant use. Nutt also said that it is possible that different dopamine phenotypes exist, with individuals who have lower levels of dopamine receptors more likely to engage in addictive behaviors as a result of the increased pleasure derived from stimulant use.

Delegates were also presented showing that amphetamines release endorphins in the putamen, suggesting that opioid pharmacotherapy could be used to regulate dysfunctions in stimulant users. If we are going to improve treatment we are going to have to be more subtle and understand that these different processes apply differentially to patients. We are going to have to target these particular processes selectively to develop different treatments. If we do this we may end up with a personalized medical approach to treatment, which is likely the best way forward in the long term”, concludes Nutt.

References

22. Personal communications: Nicholas Reuter and Ed Johnson.


