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Update on Methadone Prescribing

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HOW DO WE GET THE BEST OUT OF METHADONE PROGRAMMES? A REVIEW OF THE EVIDENCE

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WHAT ARE WE TRYING TO ACHIEVE?

“It is unfortunate that the success of methadone maintenance treatment continues to be judged by what happens when it is discontinued” (1)

- The outcomes of MMT are in-treatment harm reduction outcomes

“With this medication, and a comprehensive programme of rehabilitation, patients have shown marked improvement; they have returned to school, obtained jobs, and have become reconciled with their families.” (Dole and Nyswander, JAMA 1965)
(2)

THE EVIDENCE BASE

- “Oral MMT is the best supported and accepted form of maintenance treatment for opiate dependence” (3,4)
- Immensely powerful treatment even in isolation (5)
- Methadone maintenance does not increase length of dependence (3)
- MMT produces long-term abstinence as often as drug-free residential treatment (3,6)
- MMT does not “cause more deaths than heroin” (7,8,9,10)

HARM REDUCTION OUTCOMES OF MMT

- Greatly reduced mortality (7,8,9,10)
- Reduced illicit drug use (1,2,3,5,11,12,13,14)
- Reduction in blood-borne virus transmission (14,15,16)
(NB over 18 months in USA study, odds of HIV infection 5.4:1 for those untreated vs treated)
- Improved mental and physical health (1,2,3,5,11,12,13,14)
- Reduction in crime (1,3,5,12,17)

HOW DO WE ACHIEVE THESE RESULTS?

- Good evidence for success in a wide range of settings and countries (1,3,5,11,12,13,14)
- Increasing evidence of effectiveness in primary care settings (5,7,18,19)

BUT

- Variability in programme effectiveness (3,14)

FACTORS ASSOCIATED WITH BETTER OUTCOMES (1,2,3,11,12,13,14,20,21)

- Reducing barriers to entry
- Optimal daily dose
- Flexibility of take-home doses (3,14,23)
- High quality medical and psychosocial services
Treatment retention
- Orientation towards social rehabilitation
- Sufficient duration of treatment
- Detoxification only of willing, well stabilised patients with established abstinence
- Goal of maintenance

NB programme variables far more significant than patient variables (3,22,23)

FACTORS ASSOCIATED WITH POOR OUTCOMES (1,3,11,12,14,20,24)

- Difficulty in accessing treatment
- Restriction of methadone daily dose
- Low quality medical/psychosocial services (untrained staff, negative attitudes)
- Controlling and administrative rather than supportive and empathic
- Shorter duration of treatment
- Enforced reductions in dosages (20,24)

THE EFFECT OF DOSAGES: 1

Outcome measures

- Retention in treatment
- Suppression of heroin use

Shortcomings of research studies

- Fixed dosages (high vs low) compared
- Small sample sizes
- OR unrandomised observational

CONSENSUS OF REVIEW PAPERS:

All conclude that better response to treatment observed when higher rather than lower fixed doses used (12,21,22)

i.e. better retention in treatment, less heroin use

THE EFFECT OF DOSAGES: 2

EFFECT ON HEROIN USE:

e.g. Ball and Ross Three Cities Study 1991 (14)
As maintenance dose increased, rate of heroin use during MMT decreased (all other patient/treatment variables controlled for)

EFFECT ON RETENTION IN TREATMENT:

e.g. Caplehorn & Bell 1991 (25)
Methadone dose significantly associated with retention in treatment (other variables controlled for)

Patients on <60mg twice as likely to leave treatment as those on 60-80mg and 4x as likely to leave as those on >80mg

HOW TO ACHIEVE CORRECT DOSE?

- Maintenance dose achieves steady state plasma level with no intoxication or withdrawal between doses
- “One size fits all” doesn’t work because of individual differences
- Titration over a number of days/weeks normally used
- Individual doses low (10-40 mg) because of differences in tolerance and accumulation with repeated doses
- Toxicity related to blood plasma concentrations
- Methadone deaths in early treatment due to excessive initial dosages, failure to recognise cumulative effects, effects of chronic hepatitis, failure to inform patients of dangers of overdose
- Supervised consumption helps prevent deaths (26)

DOSAGES: SUMMARY

- Higher doses tend to be more effective (12,21,22)
- Ceiling doses are inappropriate (3)
- Patients can determine their own dose levels within limits (3)
- Patients will not push for the highest possible dosages (3)
- Flexible dosing contributes to retaining patients successfully in treatment (3,23)

BUT

- Strang et al 2005 (27): 90% of GP prescriptions for methadone were for 60mg or less, mean 36.9 mg daily

PREVENTION OF DEATHS

- MMT is a powerful treatment for reducing heroin deaths (8,9)
- Large increases in numbers of MMT patients have occurred in large cities without a rise in methadone deaths (7,8,9,10)
- Supervised consumption appears to help prevent methadone deaths (3,7,28)

BUT

Needs to be used appropriately (9,23)

RISKS OF DETOXIFICATION

Many patients request detox (29)

BUT

- Loss of tolerance can be dangerous
- Higher death rate in recently detoxed patients than untreated patients (30,31)
- Mortality in maintenance treatment is very low (less than 1% per year)
- Maintenance treatment reduces heroin deaths (3% of untreated injectors die per year)
- Harm reduction should be our goal
- Patients may need our support in staying on maintenance
- Maintenance is a good route to abstinence (3,6)

URINE SAMPLING

- Reduces illicit drug use (32) especially if related to take-home doses

BUT

Patients tend to tell the truth if no sanctions apply to illicit drug use (3)

- Absolutely counterproductive to exclude patients from treatment for illicit drug use

SELECTION OF PATIENTS FOR MMT

(1,3,11)

Poor prognostic indicators

- Poor mental health
- Polydrug use
- Dose diversion

BUT treatment can alleviate many of these problems
e.g. huge impact on depression within 3 months (33)

Authors conclude that selection of patients for MMT is
unjustified

“Assessment should not be a barrier to treatment entry”
(3)

CASE MANAGEMENT/COUNSELLING

- Methadone treatment alone is a powerful treatment (3,5)

BUT

- Outcomes can be enhanced by case management/counselling interventions (11,14,34)
- Wraparound services (supporting wider social needs) also support good outcomes (35)
- Counselling/casework should be optional – mandatory counselling does not produce better outcomes (3)
- Psychotherapy helps people with psychiatric problems but does not help drug users without psychiatric problems (2)
- Moderate rather than intensive levels of counselling will produce the cheapest cost per abstinent patient on MMT (35)
- “Intensive services seem to render treatment more expensive with only marginal improvements in effectiveness (1,35)
-)

HOW TO RETAIN PEOPLE IN TREATMENT (1,3,11)

- Long term philosophy
- Accessibility and convenience
- Higher doses (12,21,22)
- Take home doses (3,14,23)
- Availability of ancillary services
- Optional counselling, especially at outset of treatment



CONCLUSION

“The most effective programmes are those that provide higher doses of methadone as part of a comprehensive treatment programme with maintenance rather than abstinence as the treatment goal” (1)

“The evidence suggests that the benefits of long-term methadone maintenance are not provided at the expense of prolonged opioid dependence” (3)

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