Predictors for Success in Methadone Maintenance Treatment Clinic: 24 Years of Experience

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Abstract : Background: Since established more than 50 years ago, methadone maintenance treatment (MMT) is the most effective treatment for opioid addiction, a chronic relapsing brain disorder that became an epidemic in western societies. Treatment includes daily individual optimal medication methadone dose (a long acting mu opioid receptor full agonist), accompanied with psychosocial therapy. It is well established that the longer retention in treatment the better outcome and survival occur. It reduces the likelihood to infectious diseases and overdose death that associated with drug injecting, enhanced social rehabilitation and eliminate criminal activity, and lead to healthy productive life. Aim: To evaluate predictors for long term retention in treatment we analyzed our prospective follow up of a major MMT clinic affiliated to a big tertiary medical center. Population Methods: Between June 25, 1993, and June 24, 2016, all 889 patients (≥ 18y) who ever admitted to the clinic were prospectively followed-up until May 2017. Duration in treatment from the first admission until the patient quit treatment or until the end of follow-up (24 years) was taken for calculating cumulative retention in treatment using survival analyses (Kaplan Meier) with log-rank and Cox regression for multivariate analyses. Results: Of the 889 patients, 25.2% were females who admitted to treatment at younger age (35.0 ± 7.9 vs. 40.6 ± 9.8, p < .0005), but started opioid usage at same age (22.3 ± 6.9). In addition to opioid use, on admission to MMT 58.5% had positive urine for benzodiazepines, 25% to cocaine, 12.4% to cannabis and 6.9% to amphetamines. Hepatitis C antibody tested positive in 55%, and HIV in 7.8% of the patients and 40%. Of all patients, 75.7% stayed at least one year in treatment, and of them, 67.7% stopped opioid usage (based on urine tests), and a net reduction observed in all other substance abuse (proportion of those who stopped minus proportion of those who have started). Long term retention up to 24 years was 8.0 years (95% Confidence Interval (CI) 7.4-8.6). Predictors for longer retention in treatment (Cox regression) were being older on admission (≥ 30y) Odds Ratio (OR) =1.4 (CI 1.1-1.8), not abusing opioids after one year OR=1.8 (CI 1.5-2.1), not abusing benzodiazepine after one year OR=1.7 (CI 1.4-2.1) and treating with methadone dose ≥ 100mg/day OR =1.8 (CI 1.5-2.3). Conclusions: Treating and following patients over 24 years indicate success of two main outcomes, high rate of retention after one year (75.7%) and high proportion of opiate abuse cessation (67.7%). As expected, longer cumulative retention was associated with patients treated with high adequate methadone dose that successfully result in opioid cessation. Based on these findings, in order to reduce morbidity and mortality, we find the establishment of more MMT clinics within a general hospital, a most urgent necessity.

Keywords : methadone maintenance treatment, epidemic, opioids, retention