

Investment in Treatment of Psychological Disorders Could Save Money

In this editorial we will explain how investment in treatment of psychological disorders could save overall cost. We will give the example of a common psychological disorder which is addiction. Addiction to prescription opioids became a new epidemic in the United States. The Drug Abuse Warning Network (DAWN) reported that the number of Emergency Department (ED) visits related to nonmedical use of prescribed opioid significantly increased (111%) between 2004 and 2008 [1]. The highest numbers of visits were recorded for oxycodone, hydrocodone and methadone [2]. Buprenorphine is a relatively new medication which has been approved for treatment of opioid dependence in October 2002. It became available in the market in 2003. Buprenorphine has many qualities that make it an effective treatment for opioid dependence. It is a partial mu receptor agonist that can hinder priming for opioids and is safer compared with other full opioid receptor agonists [1]. It has kappa receptor antagonistic properties that may improve dysphoric mood in this population [2]. Buprenorphine is a promising and practical option for managing opioid addiction in patients receiving long-term opioid maintenance treatment, particularly for those who may not qualify for or desire methadone maintenance treatment. A meta-analysis was recently published [3] about the effect of buprenorphine dose on treatment outcome. It was concluded that the higher buprenorphine dose predicted better retention in treatment compared with the lower buprenorphine dose, and the positive urine drug screens for opioids predicted dropping out of treatment. Retention in treatment predicted less illicit opioid use, and the positive urine drug screens for cocaine predicted more illicit opioid use. There is strong evidence based on 21 randomized clinical trials that the higher buprenorphine dose may improve retention in buprenorphine maintenance treatment and reduce the risk of relapse. Based on this study a cost based analysis was presented at the Global Addiction conference May, 2013 in Pisa, Italy. The presenters showed that the buprenorphine dose range 16-24 mg daily had a significantly better retention compared to 0-8 mg, 8-16 mg or 24-32 mg daily. The cost analysis showed that each \$1 invested to provide a dose range 16-24 mg daily is expected to save \$4 in return to the society than would be saved by spending \$1 to provide a lower dose range e.g. 8-16 mg daily. It was concluded that the societal benefits among buprenorphine patients dosed at 16-24 mg daily may justify treatment providers to pay the extra ingredients costs to dose patients within this dose range when clinically and financially appropriate to do so.

Some studies report that non-fatal illicit drug overdose significantly predicted subsequent drug overdose [4-6]. Therefore prevention of future opioid overdose in high risk patients may reduce mortality and morbidity in this population. Several studies reported that Methadone Maintenance Treatment (MMT) can reduce the risk of overdose and mortality in this population [7-11]. Brugal et al. [12] recently reported that the life expectancy of their cohort of heroin users in MMT increased by 21 years during the period of the study. Factors contributing to increased life expectancy included a reduced incidence of Acquired Immune Deficiency Syndrome (AIDS) and



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reduction of death related to drug overdose. Caplehorn et al. [13] performed a meta-analysis to study the relationship between being in MMT and the risk of drug related mortality. They found that MMT reduces the risk of overall mortality in this population by 25%, primarily due to reduction of the risk of accidental overdose (heroin in particular). Conversely, dropping out of MMT increases the risk of drug overdose and mortality. Langendam et al. [14] reported that in their cohort of drug users, participation in harm-reduction MMT reduced the risk of overdose death, whereas leaving treatment was associated with increased risk.

A new interest in using a sustained release naltrexone implant as prophylaxis against heroin overdose has gained some popularity in Australia [15-17]. Hulse et al. [16] found a lower rate of hospitalization for accidental overdose in patients receiving the implant treatment. Ngo et al. [17] reported that naltrexone implants have long-term benefits in reducing opioid related hospital morbidity.

At the present time we have several evidence based options for treatment of opioid dependence that could save many lives and reduce the negative impact of the untreated disease on the society. Treatment of addictive disorders has been a neglected area of medicine. Lack of treatment can lead to devastating effects to the society. The increased rate of violence, suicide and frequent utilization of emergency rooms could increase the overall cost if preventive measures and early treatment would not be provided to this population.

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