The iconic image that pervades pharmacotherapy of opioid addiction is a shadowed face drinking a pale green liquid from a plastic medicine cup. The image of a faceless, voiceless person is apt as the historical stigma attached to the use of medications in the treatment of opioid use disorder is so great that few have braved stepping into the light to share their lived experience of medication-assisted recovery. Poised on opposing sides of this image are medication haters and medication advocates, each offering radically different views on the potential value, risks, and limitations of medication support in recovery from opioid addiction. One finds on both sides people who have negative and positive personal and professional experiences in the use of these medications, people grinding innumerable ideological axes, and people whose organizational destinies, personal careers, and financial interests are vested in the outcome of decisions to use or not use medication as an aid to addiction recovery.

For years, I have tried to forge bridges of communication across the polarized, vitriolic debates surrounding the use of medications in the treatment of addiction. I have illuminated the history and current status of medications in the treatment of addiction (White, 2014; White, 2012; White, Parrino, & Ginter, 2011) and reviewed the policies toward medication of major recovery mutual aid societies (White, 2011). I have championed the value of key medications and the legitimacy of medication-assisted recovery (White, 2007; McLellan & White, 2012). And I have called on medication-centered addiction treatment providers to dramatically expand the scope of their recovery support menus and elevate the quality of their service practices (See White & Torres, 2010). This latest missive seeks to lessen the challenges and confusion faced by affected individuals and families as they sort the pro-medications and anti-medications polemics within public, professional, and social media.

The intended goal of this paper is to help recovery advocates understand some of the complexities and limitations involved in the use of medications and to better understand the positions of some who reject the use of medications as a panacea for opioid and alcohol use disorders. The hope is that recovery advocates can help educate
affected individuals and families on the limitations of medications at the same time they assert their potential value. There is limited long-term value in replacing a mindless ant-medication bias with an equally mindless pro-medication bias. The challenge for recovery advocates is to forge a source of reliable information between the extremes of “Never” among the rabid medication haters and “Always and Forever” among the most passionate medication advocates. In our efforts to promote the legitimacy of multiple pathways of recovery—including medication-supported recovery, we need far more nuanced discussions of the potential value, the limitations, and the possible contraindications of medications across the stages of recovery. And those discussions must begin with the premise that the sources of the deeply rooted biases against and for the use of medications in treating addiction are far more complex than simply the ignorance or embrace of the latest scientific evidence on addiction treatment and recovery.

Medications (e.g., methadone, buprenorphine, and naltrexone) in the treatment of opioid addiction are frequently characterized as the “gold standard” in the scientific and medical literature and popular media (Kampman et al., 2015). Research reviews of psychosocial treatment approaches to opioid use disorders conclude that “many empirically-supported approaches for non-opioid SUD have weak or insufficient evidence to support their utility for opioid use disorder...” (Bergman, Ashford, et al, 2019). Yet, considerable resistance to the use of medications to treat opioid addiction can be found in the United States among the public, people seeking recovery, members of abstinence-based recovery mutual aid groups, addiction treatment professionals, and allied health professionals (White, 2011; Bergman et al, 2019; White, Parrino, & Ginter, 2011; Roman, et al., 2011; Keppe, et al., 2019; Andraka-Christou, et al,m 2019). Media coverage as well as technical reports on the surge in opioid addiction and related deaths consciously or inadvertently convey the impression that the “opioid epidemic” could be resolved if we could just get enough naloxone, methadone, buprenorphine, and naltrexone disseminated across the country. These same reports state or imply that the major obstacles to such dissemination are ignorance and social/professional stigma.

While not discounting the need for public and professional education on opioid addiction and wide dissemination of the scientific evaluations of opioid addiction treatments, there are less mentioned impediments related to the use of medications that deserve prominence within our discussions of the potential role of medications in recovery from opioid addiction. Below is a brief sampling of such issues with related suggestions for recovery advocates and recovery support specialists.

### History of Iatrogenesis (treatment-caused harm)

Medications originally lauded as addiction cures have later emerged as drugs with considerable addiction liability in their own right. This history includes the use of cocaine and methamphetamines in the treatment of morphine addiction, morphine used in the treatment of alcohol addiction, and the broader pattern of harm from a wide spectrum of psychotropic substances used to treat opioid or alcohol addiction (e.g., hallucinogens, sedatives, anxiolytics, and neuroleptics). Knowledge of the iatrogenic effects of earlier treatments is deeply imbedded within cultures of addiction and recovery in the U.S. That collective, intergenerational memory elicits suspicion of any new medication claiming to be a cure or treatment for addiction. This does not mean that new medications should be automatically dismissed, only that they be subjected to rigorous and sustained scientific, clinical, and personal investigation. It also means that any initial distrust of medications from members of recovery communities should be respected by recovery advocates as grounded in the experiential knowledge of those communities. Our first task is to listen and
learn, mirroring the very thing we are asking of members of these communities.

Claims of new medical breakthroughs in the treatment of opioid addiction should be viewed skeptically until controlled studies as well and clinical and personal experience justify their value across diverse populations and cultural contexts. Historically, highly amplified claims of such breakthroughs are notoriously unreliable. The downside of this history is that if we view the present and future only through this lens of the past, we may dismiss without investigation major breakthroughs in addiction treatment and recovery. Any potential harm from medications must be viewed within the context that this same potential exists for psychosocial interventions in addiction (Moos, 2005). The key is our ability to objectively portray the potential value and risks of ALL treatment and recovery support options so that affected persons can make informed choices.

**Complex Personal Histories**

People addicted to opioids have commonly used methadone and buprenorphine within the illicit drug culture as a substitute for heroin or prescription opioids, to stave off acute withdrawal, or as an attempted self-cure (Chilcoat, et al, 2019). The fact that methadone and/or buprenorphine are so intertwined within addiction histories explains the confusion, suspicion, or outright animosity when these now christened “medications” are offered as a treatment for addiction. Working through resistance to medications in the face of such resistance or ambivalence requires understanding, time, and skill, as well as respect for patient preferences regarding treatment options. The above-noted history of addiction medications and such personal addiction histories offer context on why members of particular recovery mutual aid groups may be resistant to the use of maintenance medications in the treatment of addiction. It is important that recovery advocates understand the sources of such views if they are to escape responding to such views with little more than condescension and contempt.

A distinction that some have found helpful is between past use of a “drug” for addiction maintenance and the use of professionally prescribed and supervised “medication” for recovery support—even when the “drug” and the “medication” may involve the same substance. What differs is the motivation for use, the context of use (the presence of medical supervision), reliable purity, a personally optimal dosage that provides metabolic stabilization without impairment from intoxication or withdrawal, method of administration, and availability of ancillary psychosocial recovery supports (For elaboration, see White & Torres, 2010).

When recovery advocates encounter such categorical resistance, the essential tasks are to listen, acknowledge the limitations of medication-assisted treatment for some populations, express gratitude that some people have been able to achieve recovery without medication support, elicit as clearly as possible the sources of resistance to medication support, provide facts that heighten incongruity and ambivalence about value of medication for some people, share successful stories of medication-assisted recovery, and create opportunities for contact with people who have achieved such recoveries. Every effort should also be made to discourage people in recovery from encouraging others to cease medication use or lower their dosage of medication: in one study, 25% of people taking buprenorphine and also attending NA meetings had been encouraged to stop or decrease medication use (Monico et al, 2015).

**Indications and Contraindications**

A standard practice with all medications is to define the precise condition a medication is best suited to treat and those patients who, because of potential harm, should not be prescribed the medication. After more than a century of treating opioid addiction with medications, and with full knowledge that people recover from opioid addiction with and without medication...
support, we as a professional field still have not clinically defined who is most indicated and contraindicated for pharmacotherapy of opioid addiction. Answering this question would mark a major step forward within the addictions field. The potential risks and benefits of medication support in the treatment of opioid addiction are not uniform across clinical populations. Concern about potential iatrogenic effects of addiction pharmacotherapy have limited access to medication for some populations, e.g., adolescents, young adults, people with early and lower severity opioid dependence (Gonzales-Castaneda, et al, 2019).

The question of potential degree of help or harm of medications in the treatment of addiction is unanswerable without also asking, “For whom?”, “For what purpose?”, “For how long?”, and “At what cost?”. Science- or experience-based assistance with this pro-con analysis is particularly needed for the youngest patients seeking treatment for an opioid use disorder, who are presently underrepresented in their access to and utilization of medication support (Hadland et al., 2018). Clearer answers to these questions might alter the situation in which only 35% admitted for opioid use disorder treatment have medications included as a component of their treatment (cited in Bergman, 2019).

Recovery advocates need to have a general knowledge of the evolving science and cumulative clinical experience on indications, contraindications, side-effects, and the overall benefits and risks associated with addiction treatment medications, as well as how to assertively link individuals and families to addiction medicine specialists who can offer a more in depth review of these issues. Advocates can play an important role in advocating research to answer many critical questions related to the pharmacotherapy of opioid addiction with

Optimum Duration of Medication and Social Support

The addiction treatment field has yet to reach consensus on the optimal duration of medication support in the treatment of opioid use disorder. There is widespread belief that patients are kept (“parked”) on medication forever, but the reality is that many if not most patients who begin medication support for opioid addiction will cease taking such medication within a matter of months. A recent study of more than 4,800 adolescents and young adults diagnosed with opioid use disorder (Hadland, et al, 2018) found that only 24% received pharmacotherapy and of those who did median retention was less than six months for those prescribed buprenorphine or naltrexone and less than a year for those provided methadone. The median duration of treatment for those who received only behavioral health services was just over two months. Treatments for opioid use disorders in the U.S.—those with and without medication support—do not maintain continuity of professional contact remotely close to the established period of recovery stability, which for opioid use disorders is five years of continuous remission (Hser, 2007; Evans & Hser, 2018; for review for all SUDs, see White, 2008).

Although the National Institute on Drug Abuse recommends a minimum of one year of medication maintenance to achieve optimum clinical outcomes, as many as half of patients in the U.S. who begin medication support for treatment of opioid use disorder cease medication use within twelve months of induction (Kelly et al., 2011). A recent randomized trial comparing methadone and buprenorphine six-month treatment retention found a 26% dropout rate for


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methadone and a 54% dropout rate for buprenorphine. In one large study involving more than 700 buprenorphine patients, 25% of patients dropped out in the first 30 days (Hser et al., 2014). An analysis of discharge data from 108,732 U.S. patients discharged from medication-assisted opioid therapy in 2014 is quite telling. Only 19.1% of those patients were discharged with a treatment completed discharge status; 37.6% left against professional advice, and 9.1% were administratively discharged by the treatment facility. Within this same sample, only 23.8% had a treatment duration of more than a year and 50.1% had a treatment duration of less than 90 days.²

A critical question, given these rates and timing of discontinuance, is what happens to patients clinically following cessation of medication maintenance. Studies of the natural course of addiction/recuperation following cessation of medication support suggest that these medications are “corrective but not curative.” This means that for most patients the gains made from addiction medications—like medications used in the treatment of diabetes, hypertension, and numerous psychiatric conditions—are effective only during the period of medication maintenance, with risks of clinical deterioration rising following medication cessation (Evans & Hser, 2018).

An early review of the outcomes of patients discharged from methadone maintenance drew three conclusions: 1) most patients leaving methadone maintenance were not clinically assessed as ready for discharge, 2) the majority of those who began a planned tapering process dropped out before completing that process, and 3) the majority of patients who completed a planned tapering process relapsed to heroin use following discharge (Magura and Rosenblum 2001). Such studies confirm the view of methadone and other agonist and partial agonist medications as corrective but not curative and underscore the need for a full treatment menu and assertive post-treatment recovery support services.

The characteristics of those who drop out of addiction pharmacotherapy and those who are retained are quite different. A recent study of retention in office-based opioid treatment with buprenorphine found the following characteristics associated with shorter retention: Black/Hispanic race/ethnicity, younger age, positive hepatitis C antibody status, and unemployment (Weinstein et al., 2017). Earlier reviews linked shorter retention and persistent opioid addiction to greater clinical severity and complexity, e.g., histories of physical/sexual victimization, co-morbid psychiatric disorders, and lower recovery capital (Hser et al., 2013).

Due to lost tolerance for opioids and rate of recurring opioid use, mortality risks are particularly high in the four weeks following cessation of medication maintenance, risks also shared in the same time period following release from a prison, hospital, or inpatient or residential addiction treatment program (Sordo et al., 2017). Inadequate attention has been given to the process of medication tapering when patients choose to sustain their recovery without medication. Rapid tapering, when attempted clinically (or as a result of sudden patient disengagement) or administratively (most often for continued drug use, violation of clinic rules, or non-payment of services—“feetox”) increases risk of adverse events (e.g., opioid-related emergency hospitalization as well as death from overdose). A recent study (Mark & Parish, 2019) of patients who had quickly tapered off high doses of opioids found that more than half experienced a subsequent opioid-related hospitalization or emergency department visit.

High treatment attrition, combined with the lack of psychosocial support during and following medication maintenance, contributes to the high addiction recurrence and mortality rates following medication cessation—death rates as high as four times that of patients remaining in treatment (Zanis & Woody, 1998; Sordo, et al., 2017). Public and professional perception of such high morbidity and mortality rates contribute to the negative perception of the long-term value of medication as a treatment for opioid addiction. The resulting bias against medication is not a product of public, professional, or patient ignorance, but results from fundamental design flaws in the pharmacotherapy of opioid addiction. If more positive attitudes toward medication support for recovery from opioid addiction are to be achieved, it will require enhanced strategies of treatment engagement and retention; amplified psychosocial supports to enhance medication adherence, global health, and social functioning (particularly for those with the most severe, complex and chronic disorders and for those choosing to taper off medication); and assertive monitoring and support following cessation of medication maintenance. (See White & Torres, 2010). It is important to disentangle one’s views about a medication from the clinical structures within which that medication is delivered.

Action items for recovery advocates related to duration of medication support include the following:

- Educating key constituencies that the benefits of addiction medications accrue with duration of medication support and that medication discontinuance is associated with increased risks of clinical deterioration, addiction recurrence, and death (particularly in the first month of medication cessation),
- Encouraging research to further clarify the extent to which the ideal duration of medication support varies across clinical populations and to isolate those candidates most and least likely to sustain recovery without medication support,
- Collaborating with medication providers on expanding supports for patients during and following medication tapering,
- Collaborating with medication providers to assure that all patients, including drop-outs and those discharged for rules violations, are provided post-treatment monitoring, support, and early re-intervention services, and
- Advocating against arbitrary limits on duration of medication maintenance in the treatment of addiction.

Medications and Clinical Complexity

FDA-approved medications for treatment of addiction are drug specific meaning that their positive effects extend only to a certain class of drugs, e.g., the use of methadone or buprenorphine to produce functional stabilization and suppression of craving of heroin or other opioids. While valuable, such specificity limits their clinical utility due to the following: 1) polydrug use (compared to mono-drug use) is the norm for people entering addiction treatment, a clinical profile challenging the very concept of “drug of choice,” 3) polydrug use is associated with greater psychopathology, high impulsivity and risk-taking, lower rates of treatment completion, and higher rates of post-treatment addiction recurrence, 3) polydrug use is associated with higher risks of in-treatment and post-treatment mortality, and 4) varying drug combinations and sequences pose different clinical challenges affecting the design of treatment and recovery support services (Wang et al., 2017). The effectiveness of medications aimed at opioid and alcohol use disorders is undermined by the presence of so-called “secondary” drug use via two mechanisms:

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3 See following for multiple drug use patterns among treatment admissions:

1) functional impairment due to continued or escalating use and increased untoward effects of “secondary drugs” for which no medications are available, and 2) recurrence of primary drug use while under the influence of secondary drugs, e.g., alcohol use increasing risk of recurring opioid use (Staiger et al., 2013).

Long-term follow-up studies of people with opioid use disorders find that of the substantial portion (between a third and half) of those who achieve stable recovery (five plus years of opioid abstinence) are marked by far less problem severity and complexity and greater recovery capital (e.g., education, employment, family and social support) than those who do not achieve such abstinence (Zhu et al., 2018; Hser et al., 2001; Drake et al., 2015). Tragically, those patients with the most severe and complex clinical profiles are most likely to be administratively discharged from medication-assisted treatment, drop out of such treatment, and die following treatment disengagement (Svensson & Andersson, 2012).

Also unclear are the potential differences between those who achieve stable recovery from an opioid use disorder via addiction pharmacotherapy and those who achieve such sustained recovery without medication support. Nearly 40% of Narcotics Anonymous (NA) members report regular use of narcotics prior to their NA involvement, and NA members report an average of 8.2 years of continuous recovery.4 This would seem to challenge the dour prospects of recovery from opioid addiction without medication support that one finds dominating professional and popular literature, yet such recoveries from opioid use disorders within NA remain a rare focus of scientific study (White et al., 2016). Additional research comparing and contrasting these varieties of recovery experience (with and without medication support) could have profound implications for the future design of addiction treatment and recovery support services.

The overwhelming majority of addiction medication providers assert the value of psychosocial interventions as a critical component of addiction treatment, but little more than a third report that their organizations and local communities have the resources to provide such interventions for patients using medication to support recovery from an opioid disorder (Lin et al., 2019; Kermack et al., 2017). While the value of adjunctive professional counseling continues to be debated, with research studies showing mixed results, there have yet to be studies combining medication, counseling, harm reduction education, recovery mutual aid participation, and peer-based recovery support services. Collaborations between medication providers, local harm reduction and recovery advocacy organizations, and local recovery mutual aid groups hold promise in filling this void in adjunctive services.

Action items for recovery advocates based on these findings include the following:

- Inform people involved in broad patterns of polydrug use who are considering medications for opioid or alcohol use disorders of the limited value of these medications for other patterns of drug use and encourage them to seek multimodality/integrated treatment that can address the full scope of their drug use and related problems.
- Inform people involved in broad patterns of polydrug use about the effects of polydrug use on recovery outcomes and, in particular, the increased risk of death from overdose and other causes that are linked to such patterns of use.
- Encourage treatment programs relying upon medications as their primary treatment intervention to broaden clinical menus to address polydrug use

and commonly co-occurring medical and psychiatric disorders.

- Encourage and support local treatment programs to create high intensity support tracks—integrating medication, harm reduction interventions, high-intensity clinical care, and peer recovery support services—for those individuals with the most complex clinical profiles.
- Encourage local treatment programs to explore programmatic alternatives to administrative discharge.
- Encourage research on the course of recovery from opioid use disorder following cessation of medication support and studies comparing and contrasting successful opioid recovery with and without medication support across levels of problem severity.
- Encourage creation of medication-friendly groups within existing recovery support groups and specialized groups for those in medication-assisted recovery, e.g., Methadone Anonymous, Moms on Methadone, Medication-Assisted Recovery Anonymous, and Medication Assisted Recovery Communities.
- Redirect drug-specific moral panics within local communities toward long-term solutions to the full spectrum of substance-related problems.\(^5\)

**Medication versus the Medication Milieu**

Negative attitudes toward medications used in the treatment of addiction have been inordinately influenced by the regulatory, financing, and clinical policies within which these medications have been delivered. Negative personal experiences with addiction pharmacotherapy are often based on such things as:

- Inadequate orientation to medication side-effects and poor clinical management of such effects when they occur,
- Clinic location, medication pick-up requirements, and clinic hours that interfere with work, educational pursuits, and family life,
- Arbitrarily high or low medication dosing policies\(^6\) that leave one either impaired by sedation or impaired by breakthrough withdrawal, cravings, and persistent drug-seeking impulses,
- Clinics that serve only as medication dispensaries without an expanded menu of services to support long-term personal and family recovery,
- Punitive induction procedures in which one can be punished (e.g., medication dose reduction) or discharged for positive drug screens or for violating clinic policies\(^7\),
- Personally invasive drug testing procedures imposed on a population with high rates of past sexual victimization (e.g., observed urine drops),
- Poorly trained counselors who function more as behavioral police (focus on coercion and control) than as therapists or clinical advocates,
- Excessive medication costs (pharmaceutical profiteering) combined with clinic management more concerned with payment and profit than clinical progress, and
- Clinic milieus more infused with a culture of active addiction than a vibrant culture of recovery support.

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\(^5\) Drug epidemics, rather than spontaneously remitting or responding to policy or professional interventions, most often morph into something else, e.g., cocaine and methamphetamine surges setting the stage for subsequent surges in opioid use. Communities that focused all of their attention in responding to surges in opioid addiction and related deaths will be demoralized when the opioid surge morphs into rapid increases in cocaine and methamphetamine use.

\(^6\) Lower medication dosage policies lead to higher rates of opioid and other drug use and higher rates of treatment disengagement (Hser et al., 2014; Timko et al., 2015).

\(^7\) For insight into the harmful effects of involuntary discharge from medication-assisted treatment, see Svensson & Anderson, 2012.
Educating multiple parties about the value of medications in the treatment of opioid use disorders will be ineffective as long as these very real contextual factors are ignored. The status and image of medications in the treatment of addiction will not be elevated until there is a parallel elevation of the quality of care and professional status of those organizations and individuals providing the medication. The potential value of medications in the treatment of addiction will remain limited as long as we fail to address the contextual conditions in which medications are nested. Lacking that, the view of medications such as methadone and buprenorphine will continue to be shaped by the least stabilized patients and the lowest quality service providers.

One of the most important things recovery advocates who support the legitimacy and value of medication-assisted recovery can do is enter into collaborations aimed at elevated the quality of medication-assisted addiction treatment.

**The Mathematics of Medication**

There exists no professional consensus on the domains and measurement instruments that should be used to evaluate the effectiveness of addiction treatment, just as there is no uniform definition of recovery from opioid dependence and the measurable benchmarks of such recovery (Wiessing et al., 2017). To date, scientific studies of methadone, buprenorphine, and naltrexone have emphasized what these medications can subtract from one’s life during the period of their use. These studies note the association between medication adherence and elimination or reductions in illicit opioid use, mortality risk, criminality, HIV and hepatitis C infection and transmission risks, emergency services use, and reductions in overall health care costs (reviewed in White and Torres, 2010 and White, Parrino, and Ginter, 2011). Each of these outcomes is a valuable in its own right, but collectively they do not address whether anything is being added to the lives of medicated patients. Studies noting an enhanced quality of physical and emotional health as a result of addiction pharmacotherapy are far less likely to be conducted, professionally cited, or noted in press coverage of the value of medications in the treatment of addiction. This leaves affected individuals and families unclear of many key questions. What are the larger outcomes of medication support in terms of long-term abstinence or remission of the opioid use disorder? What are the long-term effects of medication maintenance on global health and social functioning? To what extent does medication support help repair and elevate the person-family-community relationship, including parent-child relationships? These are questions that remain unclear to potential service consumers as they weigh treatment options and the pro-medicine and anti-medicine polemics.

Beyond these subtraction and addition effects lies a larger question: Might uniquely combining and sequencing medication and psychosocial supports across the stages of recovery produce dramatically enhanced outcomes (a multiplication effect) beyond those being achieved when these services are provided only in mutually-exclusive silos? The future of treatment for the most severe, complex, and chronic substance use disorders may well lie within the answer to that question.

Recovery advocates and recovery support specialists can play important bridge roles in integrating medication-focused treatment, professionally-directed psychosocial interventions, harm reduction services, and peer-based recovery support services. Such experiments are underway and warrant rigorous evaluation of their effects on long-term recovery outcomes.

**Medications in Perspective**

Medications can play a valuable role in harm reduction, recovery initiation, and recovery maintenance for populations for whom they are indicated and acceptable, but we do a disservice to those populations, their families, and their communities if we portray medication alone as a panacea for the cure of all opioid addiction and fail to carefully communicate both the potential value and
the limitations of medications. Issues like the above need to be part of our nuanced discussions with those we serve. We similarly do a disservice if we let anti-medication polemics go unchecked within our local and national conversations.

Medications are best viewed as an integral component of the recovery support menu rather than being THE menu, and their value will depend as much on the quality of the milieus in which they are delivered as any innate healing properties that they possess. If the effectiveness of medication-assisted treatment (MAT) programs is compromised by low retention rates, low rates of post-med. recovery support services, and high rates of post-medication addiction recurrence, as this review suggests, then why are we as recovery advocates not collaborating with MAT patients, their families, and MAT clinicians and program administrators to change these conditions?

People seeking recovery from opioid use disorders and their families are in desperate need of science-grounded, experience-informed, and balanced information on treatment and recovery support options—information free from the taint of ideological, institutional, or financial self-interest. In an ideal world, recovery advocates would be a trustworthy source of such information.

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