Risk/Benefit Discussion of Alcohol Use Disorder Medications: Behavioral Economic Considerations and General Recommendations

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Abstract

Background: Despite the development of several relatively safe and effective medications to treat alcohol use disorder (AUD), underutilization of these medications continues to be a challenge. With other factors, judgments about medications' risks and benefits can influence prescribers' practices and patients' acceptance of these medications.

Objective: Describe how behavioral economic principles and presentation of risks/benefits of AUD medications can impact these medications' utilization and suggest guidelines for how prescribers should describe these medications to patients.

Methods: Literature selected by the authors was used in this commentary and formulation of guidelines. Results: Behavioral economic principles relevant to judging risks and benefits of AUD medications include salience, recency, the halo effect, narrative thinking, avoiding cognitive dissonance, and patients' interoceptive effects. Benefits of reduced alcohol use may be too abstract without elaboration. Medications are more likely to be taken by patients who envision their benefits as salient, prompt, and consistent with other ideas they have about their alcohol use and/or tailored to their psychological state. Explaining risks and benefits using established quantitative and qualitative terms has predictable effects on patients' perceptions. Risk/benefit discussion should be bi-directional between patient and provider, personalized to issues valued by each patient, and tailored to the individual's alcohol-induced state. We propose methods to improve information transfer and reduce biased decision making.

Conclusion: Whether and how a risk/benefit discussion of AUD medications is conducted can influence utilization of these medications.

there is no evidence of this adverse ewect [32-34]. Other common

implication for an AUD risk/beneẐt discussion is that a patient who is presently craving alcohol is primed to hear the risks of AUD medications as being more salient and the beneẐts as less alluring. In

Relative risk reduction indicates how much risk (e.g. persistent heavy drinking) is reduced in the experimental group compared to a control group, and thus incorporates the baseline rate into the calculation. Using the example above, the relative risk reduction would be a 15% reduction in drinking divided by a 55% reduction in the control group, equaling 27%. The number needed to treat refers to the number of patients who need to be treated, compared with a control, to get the desired outcome in one patient. Number needed to treat is calculated by dividing 1 by the absolute risk reduction (in this case, 1 ÷ 15%=7). In this example, 7 people would need to be treated to see a benefit. Studies consistently report that relative risk formats produce more favorable evaluation of treatments [54], perhaps because this format involves larger absolute numbers.

Recommendations

General considerations about risk/benefit ratio discussion

The following recommendations incorporate important elements from the shared decision-making model of care. This model is characterized by information and responsibility sharing between prescriber and patient, and by the patient's active engagement in discussing risks and

Efficacy

The medication's efficacy is better understood when it is stated clearly, not only for abstinence but also for other drinking outcomes (e.g. heavy drinking days, improved liver function). This is consistent with recent changes in FDA guidance on the design of medication clinical trials that emphasize reduction in heavy drinking over total abstinence [2]. If the medication's benefits accrue at some delay after starting treatment, this should be explained.

Combining the medication's benefits with a plan for psychosocial interventions can ensure better outcomes. There are cognitive-behavioral skills (relapse prevention strategies) that will help in conjunction with the medication.

Side effects

It is necessary to disclose any regulatory warning. Clarification of permanence (side effect lasting a week or permanent), timing (at the beginning of treatment or later during treatment), and the probability of the expected outcome are of great importance [29]. The patient will appreciate if he is informed about appropriate measures to be taken to prevent or manage any adverse event. Monitoring vital signs, blood tests, and mood can minimize adverse events.

It is important that providers consider the effects of verbal, numerical or graphical representation in relation to the patient's perception of the level of risk. They can do so by choosing a risk presentation format that the patient is most likely to understand. It is important to tell the patient about side-effect management strategies they can use on their own and those for which they should call the prescriber.

The risk of leaving AUD untreated is part of the risk discussion [29]. Unchecked AUD is associated with significant morbidity and mortality and declining an AUD medication risks the psychosocial and medical consequences of drinking.

Personalization of risk/benefit ratio

A risk/benefit discussion tailored to patients' needs is optimal [29]. For example, if a patient is experiencing insomnia, in addition to urges that foreshadow relapse to drinking, the patient may prefer an AUD medication that is sedating and can be taken at night (e.g. gabapentin). This approach also takes advantage of the previously mentioned observation that AUD patients are particularly likely to value immediate (versus deferred) benefits. For other patients with ambivalence about the goal of reducing alcohol use and resistance to take AUD medications, the prescriber might use Motivational Interviewing to promote change. Prescribers can also personalize the description of side effects that are highly unlikely in a particular patient, e.g. “Naltrexone produces undesirable symptoms in patients taking opioid pain relievers, however, you are not likely to be affected by this because you don't have a disease that requires opioid pain medications”. Conversely, providers will understand the risks a patient will be particularly sensitive to. For example, a patient with a cognitively demanding job may consider the risk of cognitive slowing from topiramate to be extremely distressing.

It is not uncommon for patients to form unrealistic expectations about a medication's effects. This issue has been studied with medications that promote weight loss [62]. Patients' average expectations of weight loss pharmacotherapies are that 35% of body

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