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Get Ready for FDA Investigations Over Semaglutide

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One of the hottest prescription drugs on the market right now is semaglutide, better known under its brand names Ozempic, Wegovy, and Rybelsus. While it was originally created as a treatment for type 2 diabetes, its weight loss effects led to it being prescribed for chronic weight management purposes for obese (someone with a body mass index of greater than 30) and overweight patients, or patients with a personal or family history of another weight related condition. However, it has since been used off-label for use as a cosmetic weight management program so frequently that its supplies are dwindling. This off-label use as weight loss medication is often at the urging of online celebrities and content creators. Together with hit-or-miss insurance coverage for the drug, this has led to its price soaring out of the reach of the people who need it the most to treat their diabetes.

The chaos is likely to attract an investigation by the U.S. Food and Drug Administration (FDA), which may examine several different aspects of the situation and a variety of the players who have gotten involved.

What is Semaglutide?

Semaglutide is a synthetic hormone that mimics glucagon-like peptide 1 (GLP-1). GLP-1 is the hormone that gets released from the intestine when you eat. It tells other parts of your body, most importantly your liver, pancreas, stomach, and brain, when you are full. In the stomach, the GLP-1 receptor slows down the process of digestion. In the brain, it reduces the craving to eat more. In the pancreas, GLP-1 receptor induces the production of insulin and reduces the production of glucagon, which in turn increases blood sugar levels. Semaglutide acts as an insulin inducing drug.

Semaglutide was developed for diabetes treatment by the pharmaceutical company Novo Nordisk back in 2012, and is marketed in the U.S. under several different brand names. Ozempic is a shot that can be administered at home once per week in varying dosages. Rybelsus is the drug in an oral form.

However, the body weight loss treatment capabilities of semaglutide were clear from the very beginning and were confirmed in trials, including a double-blind, placebo-controlled, randomized withdrawal trial, and other studies. One study published in *The New England Journal of Medicine* in 2021 found that semaglutide led to an average weight loss of 15 percent.

In June 2021, the FDA approved Wegovy, a higher dosage of the drug that could also be injected but that was indicated specifically for weight loss rather than diabetes treatment. However, the FDA's approval was restricted to people who were obese or who were overweight and had a weight-related condition, like high blood pressure. It was not approved for cosmetic weight loss, or a weight loss program that was unrelated to health issues.

There are also some possible negative side effects of the drug, like acute kidney injury or gastroesophageal reflux disease.

Off-Label Use, Popularity, and Fallout

It was semaglutide's efficacy as a weight loss treatment, however, that made it incredibly popular for people who were looking to lose body weight but who were not medically obese or who had a health condition that would improve if they shed some pounds. For these people, semaglutide was an attractive alternative to surgery, and was seen as a beneficial new treatment option in their eyes. To add to the allure, many online content creators – both within and outside of the diabetes support community – touted its weight loss abilities.

The resulting demand quickly outpaced supply, even though the drug was only available with a doctor's prescription. As of March, 2023, the FDA lists semaglutide as being in short supply. The shortage has allowed the drug maker, Novo Nordisk, to ramp up the price for the supply that is still available. Because the drug is still under patent protection in the U.S., the company does not have to worry about competition. As early as last year, the monthly cost was already nearly $1,400.

To complicate matters, many health insurance providers, including Medicare, do not cover semaglutide for non-diabetes health conditions. Patients seeking to use it for weight loss – both on-label and off-label – often have to pay for it out of their own pocket. Access to semaglutide, therefore, has become a measure of means: Wealthy people are more likely to be able to get it than poor people are. General obesity and diabetes, however, disproportionately affect lower income individuals, so the dwindling supply has been hurting them, the most.

As a result, many patients have turned to compound pharmacies to get their hands on the drug. However, merely replicating a drug – particularly one that is still under patent protection – is outside the course of these pharmacies' business and could infringe on the law in multiple ways. For patients who can no longer rely on the brand name to know they are getting the right drug and dosage, this alternative can also lead to uncertainty and is a risky health decision that could cause considerable harm.

The complications stemming from this whole situation makes it almost guaranteed that there will be an FDA investigation over it. The only question is how far it will reach and which parties it will focus on.

Potential Targets of FDA Investigation

In such a complicated situation as this, there are numerous ways for the FDA to approach it. It is possible that we will see the agency tackle it on multiple fronts.

First, and perhaps most likely, compound pharmacies are going to see additional scrutiny. These pharmacies are supposed to be providing unique care for patients on a case-by-case basis. If they could routinely infringe on a drug's patent protection by recreating a new drug in the lab, it would

undermine much of the structure of the pharmaceutical industry in the United States.

Doctors who prescribe semaglutide, especially those who prescribe it very often, are also likely to find themselves under the agency's microscope. While there is nothing new or illegal or even uncommon about prescribing a drug for an off-label use, doctors are generally only supposed to do it if none of the other drugs that are approved to treat the medical condition have helped or if there is not a drug with FDA approval to treat the issue. Most of the time, neither of these will be the case when it comes to semaglutide. Because there are numerous other weight loss drugs on the market, including over the counter drugs, the FDA could come down hard on doctors who routinely prescribe semaglutide for cosmetic weight loss without trying other measures a lifestyle intervention first.

Finally, the FDA may also investigate the content creators and online celebrities who have been touting semaglutide for off-label use as a cosmetic weight loss drug. Generally speaking, promotion for off-label use is prohibited. When pharmaceutical companies do it, they are almost guaranteed to get investigated by the FDA, as the FDA remains committed to the development and approval of safe therapies and treatments. It will be interesting to see how eagerly the agency goes after online celebrities and YouTubers who have recommended the drug for anything other than treating diabetes or obesity.

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