I stumbled upon this article http://www.dailymail.co.uk/health/article-3152248/Could-common-heartburn-drug-cure-TUBERCULOSIS-Prevacid-offers-excellent-hope-new-treatment-say-scientists.html at “The Daily Mail” and it immediately caught my attention. The article claims that scientists at the Ecole Polythechnique Federale de Lausanne in Switzerland are able to use Lansoprazole (an antacid also known as Prevacid) to treat Mycobacterium Tuberculosis.

Prevacid is an accessible, safe “over the counter” drug most commonly used to treat heartburn by inhibiting the production of stomach acid, resulting in less heartburn and ulcers. If the findings are proven to be true, the time and money spent on the safety and effectiveness of the drug can be lessened a bit because Lansoprazole is already proven to be safe and effective. Using a drug already widely accepted for an “off the label” use might be easier to get on the market in efficient time.

According to the World Health Organization, TB has infected 9 million individuals world wide and killed 1.5 million in 2013. Around 1/3 of the world has latent TB. Because TB mostly occurs in low to middle income countries, providing an “over the counter” cheaper medication to these individuals and their hospitals can be beneficial financially.

Currently TB is treated with 4 separate antimicrobial drugs for the duration of 6 months along with supervision by a health worker or trained volunteer for maintenance. If this heartburn drug can cure TB, reducing the amount of pills from 4 to 1 will be widely received financially and also qualitatively for the patient.

Also there are reports of “ drug-resistant” TB, where certain strains have become resistant to the medicine currently given http://www.scientificamerican.com/article/new-genetic-insights-show-how-tuberculosis-may-be-evolving-become-more-dangerous/. By introducing a new drug to the resistant strains, the TB will be easier to cure because it hasn't built any resistant to this new chemical drug, thus giving hope to those who are on the second line drugs for an easier, less time consuming and less expensive cure.(Second line drugs are given to these patients for years, affecting their wallets and maybe even their spirits)
it is already an OTC safe marketed drug so if the scientist are able to prove the effectiveness of this “off the label” use, it would be beneficial to all individuals, both those infected and those around the infected.

As hygienist TB along with hepatitis, AIDS and herpetic infection are important to us because these pathogens are transmittable through the oral cavity. And TB can easily be directed to the lungs through inhalation, from a simple cough. TB droplets are only 0.5micrometers to 1 micrometer, so tiny that even our clinic masks are of no help because it can bypass through the material as they only stop aerosols of 3micrometers and larger. Also TB aerosols suspend in the air for hours after the patient has left, leading to inhalation hours after the appointment is over. TB is an important disease that directly affects us as hygienist therefore knowing and recommending an OTC medication to those infected can benefit us from not getting TB, not transmitting it to others and treating the patient who can be cure and receive a good cleaning without worry. The downside is that the drug is only effective when TB has already infected the cells(specifically tested on lung cells). However so far the testing shows promise and hopefully it will succeed in becoming an OTC drug for TB. Thus far the only prevention for TB is through vaccination.

The Journal Reference is

Rybniker J, Vocat A, Sala C, Busso P, Pojer F, Benjak A, Cole ST. Lansoprazole is an antituberculous prodrug targeting cytochrome bc1. Nature Communications, July 2015 DOI: 10.1038/ncomms8659 and the original article on the Ecole Polythechnique Federale de Lausanne website is http://actu.epfl.ch/news/the-next-anti-tuberculosis-drug-may-already-be-i-2/. There are no distortions or false information from the original article to the newspaper article. In fact, both articles are very similar in wording, almost copies of one another.