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NEWSLETTER

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Galenisys is proud to confirm that our clients, Gennecs Pharmaceuticals & their affiliate, Gennvax, are Platinum sponsors of the next Africa Health Conference & Exhibition that will be held in Cairo in June 2023.

Africa Health ExCon, is the largest annual Medical Exhibition and conference in Africa and was established to be the continental hub of health innovation and trade in Africa and the Middle East. Their vision is the creation of a sustainable platform connecting the world healthcare buyers and suppliers under one common roof, thus enabling all healthcare partners to network & spur Healthcare trade.

Gennecs/Gennvax will be highlighting their vision of supplying much needed essential vaccines to Egypt, and the African continent which suffers from a desperate shortage of vaccines for vulnerable populations. Gennvax is currently designing a state of the art vaccine manufacturing facility and obtaining the vaccine manufacturing and control technology required to produce these essential vaccines.

Gennvax will bring together their in-house staff who are driving the vaccine project to a rapid and successful conclusion along with Vaccine experts from International Regulatory Agencies and Industrial Organisations.

It is extremely fulfilling for Galenisys to be associated with and to offer support to Gennecs / Gennvax in this most worthwhile project.





OPIOIDS – A COVID SIZE EPIDEMIC



By Steve Biddulph

Fellow of Royal Institute of Microbiology. Board level pharma experience. QSM and Aseptic Manufacturing & Control Expertise

The FDA has recently announced a new framework to attack the devastating public health crisis affecting the whole of the USA, namely opioid overdosing. I was shocked to learn that:

More people aged 15 -54 died there, due to opioid-involved overdose than due to COVID-19!

Based on provisional CDCP data, over 107,000 opioid overdose deaths occurred in the 12-months ending in August 2022. Let this crisis be a warning to Medical Professionals in the rest of the world.

To address this, FDA announced an “Overdose Prevention Framework“, which is aimed at undertaking impactful, creative actions to prevent drug overdoses and reduce deaths. In this the FDA intends to **expand access to lifesaving overdose reversal products such as naloxone.**

Other FDA actions, introduced are :

- Naloxone Access: Answering Questions Public Meeting - a series of virtual public meetings to explore effective approaches that could increase naloxone availability.
- Issuance of Guidance to Help Facilitate Availability of Naloxone. The guidance, “Exemption and Exclusion from Certain Requirements of the Drug Supply Chain Security Act (DSCSA)”, increases the ability to obtain prescription naloxone directly from drug manufacturers and distributors and expand public availability of this critical medicine.
- Issuance of Nonprescription Naloxone Federal Register Notice - The “Safety and Effectiveness of Certain Naloxone Hydrochloride Drug Products for Nonprescription Use” announced FDA’s preliminary assessment that certain naloxone drug products may be approvable as safe and effective for non-prescription use.
- Harm Reduction Stakeholder Call – introduced to discuss naloxone access.

This crisis is not yet as evident in Europe but Medical Professionals need to be aware of the dangers of overprescribing opioids in pain management.

Public Health England have released updated guidance on take home naloxone in the UK, entitled ‘Widening the Availability of Naloxone’. Health Authorities in Scotland N Ireland & Wales are also seeking responses to this consultation to assess the viability of **proposals to widen access to naloxone** by expanding the list of services and individuals that can give it out without a prescription or other written instruction. “Our intention is to prevent at-risk people who use drugs from dying due to an opioid overdose”.

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Meanwhile, 120 police officers in north-east Scotland are issued naloxone kits to combat record drug death numbers.

And amendments are being considered, to the UK Human Medicines Regulations 2012 (HMRs) to allow for naloxone to be more easily distributed to at-risk people who use drugs.

Naloxone, on the WHO List of Essential Medicines, sold under the brand name Narcan among others, is a medication used to reverse or reduce the effects of opioids. It is commonly used to counter decreased breathing in opioid overdose. Effects begin within two minutes when given intravenously, and within five minutes when injected into a muscle. The medicine can also be administered by spraying it into a person's nose. Emergency medical services data from Massachusetts found that 93.5% of people given naloxone survived their overdose.



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OBESITY - THE OTHER SORT OF INFLATION



Can GLP-1 Agonists stem the obesity tide?

At this time of year in the evolutionary past of the northern hemisphere, food stocks were low or had all run out. Homo sapiens knew this and stocked up with food advance – by eating it when he/she could. As a result, our species evolved over time to hang on to fat when it accumulated. It's the same problem today, and the World Obesity Federation reports that:

1.3 billion people age older than five are “obese” (Body Mass Index>30).



A further 24% of the worlds population are “overweight” (BMI > 25). And more obesity is forecast.

The implications are serious for the world economy, healthcare costs, and in particular for the people concerned, because of associated illnesses and premature death. Obesity is associated with diabetes, strokes, and heart disease. The numbers are stark, for example:

women with a BMI >35 are 90 times more likely to have diabetes than those with a BMI of 23.

Obesity also increases cancer risk, and it increased vulnerability to Covid. In total some 4mio deaths per year are attributed to obesity.



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However, we can't say that people don't try to lose weight. In fact, some \$250 billion per year is spent on dieting efforts. But as people who have tried various remedies will testify, it is very hard to be successful; and even when there are benefits, these tend to be temporary. With diet & exercise efforts only 10-20% of people are successful losing weight say investigators.

It's an uphill task of course because we don't expend anywhere near the energy that our ancestors did in walking, and manual labour.

Given the size of this health problem there has been a lot of investigation as to what's causing the weight gain.

One finding is that when the body's calorie intake is reduced, the hormone ghrelin signals to the brain that food intake should be increased. A second finding is that a body which has lost weight appears to remember its previous weight and tries to regain it. It was beneficial eons ago, but is bad news for the weightwatcher.

Thirdly it seems that a tendency to obesity partly depends on one's genetic makeup. A further finding in studies, is that humans consume more calories when offered modern processed food compared with an offering of unprocessed food.

Given all the effort that has gone in to solving these problems it is pleasing to report that

The new group of drugs known as GLP-1 Agonists appear to be successful weight reducers

Drug companies, their investors, and analysts, are delighted with the results of various trials and on the approval by FDA in 2021 for the product Wegovy, manufactured by Novo Nordisk. There are expectations that it's North American sales will be 3 to \$4 billion in 2023.

Eli Lilly have a similar product Mounjaro which is hoped to receive approval shortly as its trials reported some 20% weight loss on average. The product is also expensive, and as the potential market is so huge an analyst forecast that sales could be \$150 billion by 2031, and even become the biggest drug ever.

Products are the result of research into diabetes treatments and the fact that they can be administered by injection by patients themselves is helpful since many diabetes patients are already familiar with this and related injection devices. GLP-1 Agonists mimic the hormones the body produces after a meal which stimulates the release of the hormone insulin but less Glucagon.

It's these effects which regulate the level of glucose in the blood. It's serendipity that GLP-1 Agonists also slow down the rate of gastric emptying ie food stays in the stomach for a longer time, so people so feel fuller and therefore want to eat less. The active's third beneficial effect is that the body is more likely to breakdown fat.

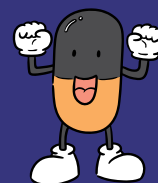
It's relatively early days (some side effects and post marketing surveillance will be important as always) but the potential of these drugs is enormous, and welcome, given the huge worldwide costs and implications of obesity and the misery which follows.



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ANTIBIOTIC SHORTAGES IN EUROPE – LOW PRICES & CAPACITY SHORTAGES



By Jose Zapata

Galenisys Pharma Senior Expert. Pharmacist with frontline experience in Quality, Operations & Project Management.
PDD Certified

As antibiotic shortages emerged in most European countries in late 2022 eleven EU Consumer Organisations wrote to the EMA Executive Director & members of the Executive Steering Group on Shortages and Safety of Medicinal Products (MSSG) as follows:

...“Amoxicillin and amoxicillin plus clavulanic acid, especially paediatric formulations, have been in short supply in Europe since October 2022. Most EU Member States are affected, as well as other large countries like the USA and Canada. Supply issues are thus global, and imports are not an option to alleviate the current shortage.”..... “we believe that the situation of antibiotic shortages should be declared a ‘major event’, as defined by EU Regulation ..”

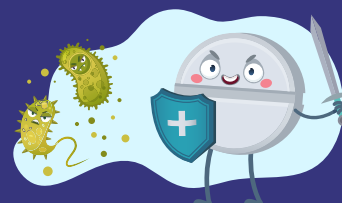
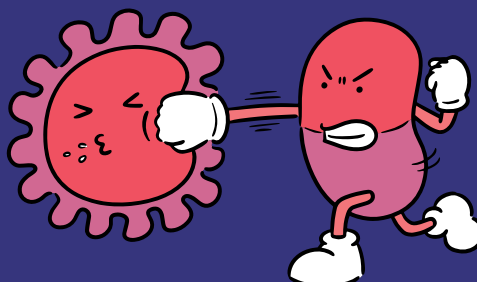
However on Jan 26th 2023 Reuters reported that “ Europe's drug regulator has decided not to label the antibiotic shortage on the continent a "major event",

In a follow up article** in February “Why Europe's drug shortages may get worse” Reuters resumed the situation as follows:

- Low generic drug prices mean razor-thin margins for firms
- Companies say they cannot boost output enough due to costs
- Making generics in Europe may become unsustainable

Alerted to shortages of amoxicillin in Spain, Ignasi Biosca-Reig CEO of Spanish drugmaker Reig Jofre, quickly added shifts at his drug company's factories to boost production. But a few extra shifts was the limit - he couldn't justify investing millions of euros in new production lines for the generic drug. Current prices don't compensate sharply rising costs.

Spain set the price manufacturers are paid for paediatric amoxicillin two decades ago when the generic version of the drug was first launched in the country. The price of paediatric amoxicillin was set at 98 cents (\$1.05) for 60 ml in 2003. In 2013, that became the price for 40 ml but it hasn't changed since. But costs have. (Half the generic medicines sold in Spain are priced below 1.60 euros per box or bottle, the country's generics manufacturing association said).



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Elisabeth Stampa, of Spanish company Medichem, said in most European countries there was no mechanism to review prices, link them to inflation, despite the APIs becoming scarce.

Many European countries, also cap the prices: “....it's the overall European market framework, which doesn't allow us as a producer to adjust prices flexibly to reflect change in input costs, especially on essential medicines,” said Giovanni Barbella, at Sandoz, the Swiss generic producer. It will be adding extra shifts, at its Austrian factory, to increase production of amoxicillin.

GSK also hired new staff and added shifts at its amoxicillin plants in Britain and France. Prices of antibiotic generics in Britain are on a par with Spain, according to drug pricing expert Melissa Barber, while in Germany, the biggest generics market in Europe, the average amount manufacturers receive has fallen 66% over the past decade, Germany's generic drug association Pro Generika said.

Crucially there is no central EU system that tracks supplies of essential generic drugs in each country, (as is the case for patented medicines) so manufacturers & trade groups are often unaware when there is a risk of shortages, & so won't plan advance campaigns.

Promises, promises.....

Germany's parliament is due this year to consider legal changes to its tender system for generic drugs while Spain is ... considering changes to its pricing system that could result in temporarily paying higher prices for drugs such as amoxicillin.

In March the EMA management board was “updated on the ongoing efforts of EMA's Executive Steering Group (MSSG) to closely monitor several critical shortages, in particular medicines containing the antibiotic amoxicillin., the MSSG has been encouraging EU Member States to consider national regulatory flexibilities to allow the distribution of medicines that may not be authorised in their Member States. In addition, EU regulators have met with the main parties involved in the supply chain of amoxicillin to provide regulatory support to increase production capacity....”

(It might ease flow, but I'm not sure how regulatory support increases capacity)

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Shortage of European Capacity

The above “updating”, “monitoring” & “encouragement” doesn’t solve the problems. It’s pricing & investment decisions which ultimately determine output capacity in Europe.

As Reuters reported “The EMA and the European Commission have met repeatedly with drugmakers and trade groups since the shortages were first reported in October 2022, **but no major action has yet been announced**, all the parties involved said”.

Years of price pressures on manufacturers has forced many smaller firms to get out of the business and only a few generics makers service much of Europe for drugs such as amoxicillin. Five companies - Britain's GSK, Sandoz, American drug company Viatrix, India's Aurobindo, and France's Servier - have nearly 60% of the amoxicillin market in Europe, according to IQVIA.

"There has been a decline in European capacity, there is not the spare capacity to really respond to these shortages," said Rex Clements, CEO at Dutch API maker Centrient Pharmaceuticals.

Thomas Cueni, DG of the IFPMA summarises the situation like this: "You get what you pay for. With price being the decisive criterion in tenders, you are sending a message that security of supply, quality and environmental standards are less important".

** Reuters February 8th 2023

