

# Dawahub

online monthly publication



## **MASKED GEAR**

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## #HealthcareDialogue



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# Editorial Team

## Welcome message by co-founder.

Welcome to our online publication. At Dawahub, we believe in the free flow of information. Lack of free flow of information in the healthcare industry has trapped both the service/product providers and consumers in a blame game that further widens the gap. This trend is a dangerous one as healthcare, in all its forms of practice including traditional and spiritual, is best practiced in complete trust between the providers and the consumers. The dark clouds in our healthcare are a breeding ground for cartels, maintain-status-quo-at-whatever-cost proponents and hear-no-evil-see-no-evil practitioners. There's a silver lining though as some minority of healthcare professionals are conscious of the challenges in and out of the health sector.

As the name Dawahub suggests, our publication is online and covers a wide range of topics in the going on concern of healthcare in Kenya. We engage a team of the most informed and agents of change (for the better) among the healthcare professionals in Kenya comprising doctors, clinical officers, nurses, pharmacists, pharmaceutical technologists, public health, midwives and other community health workers. We hope we deliver the conveyor belt for the next phase of our healthcare and become center for medical tourism. There are many young healthcare professionals who find themselves in the middle of 'bondage' but would love to do things differently given the chance and environment. The trappings of survival and the responsibilities to provide for family suffocate one's conscience involuntarily.

The opinions herein represent the writers opinion and DOESN'T represent the position of First Dawahub Limited.  
Sorry to be the bearer of the good, the bad and the ugly news.



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# COVID-19

## CORONA VIRUS VS MILLENIUM BUG

### *Corona Virus Before 2020?*

*By Dawa Editors*

The corona virus family has been in existence for as long as viruses have been known to man. They cause common cold/flu. How common was the name corona virus before 2020? Life is a learning curve and we learn something new every day they say.

Corona virus is now a household name. Thanks to the virus, washing hands is no longer optional. Wearing mask around others is not weird.

However, corona virus specifically covid-19 strain has divided opinions. The other subjects that have divided opinions to this level were the millennium bug and to a lesser extent, climate change.

*In today's world of advanced technologies both in science and art, different countries have adopted different strategies to combat or surrender to the existential threat of the pandemic.*

*A pandemic is a disease outbreak that is reported in most parts of the world. It's bigger than epidemic which is localized. We can safely say, the millennium bug was a pandemic too since in both scenarios the impact was global.*

*Millenium bug Let's refresh our memories on the millennium bug before we rush into judgement.*

*Below is a publication by Africa Conversations Inc.*

It's not hard to find echoes of the late 1990s in the zeitgeist. Now as then, impeachment is on many peoples' minds (President Bill Clinton and now Trump), and films such as The Matrix and The Sixth Sense continue to influence culture. Another feature of the same era that perhaps has a more important, if not subtler, influence is the infamous Y2K (Year 2000) bug.

Y2K was the great glitch in computer systems that looked capable of destroying civilization at the stroke of midnight on the millennium. In the end, however, nothing much went wrong. Some people started to wonder if we had been misled all along. In fact, they couldn't have been more mistaken. Y2K is in danger of becoming one of those moments in history from which exactly the wrong lessons have been drawn.

Many of the systems that were at risk from the Y2K bug dated from the 1970s, 1980s and early 1990s. This was the era when the alleged insistence by Bill Gates that "640k [of RAM] ought to be enough for anybody" was still ringing in people's ears. Even powerful servers had only a few megabytes of RAM - a fraction of what you would find in most ordinary PCs today.

With so little space, programmers were always trying to come up with ways to conserve memory. Dates were one of those things that were integral to most computer programs, and years came to be stored as a number between "0" and "99" - so for example, "80" would represent 1980. The advantage was that only a single byte of memory would be used. But with the new millennium soon to come around, it meant that the year "99" would become "100". As a result, computer programs would believe that the year was 1900 rather than 2000, which threatened to raise serious problems.

Bug on out

“*A pandemic is a disease outbreak that is reported in most parts of the world.*”

It looked likely that financial transactions such as accrued interest would be calculated incorrectly. Monitoring software would suddenly believe it had expired and ceased to work, while navigation software would not be able to compute positions correctly. Still more alarming, failures in individual mission-critical systems might cascade. This could cause power grids, telecoms networks and financial systems to fail; oil rigs to stop pumping oil; hospital patient record systems to start prescribing the wrong drugs.

The sheer scale of such failures would make recovery difficult. This would potentially affect countries' economies and the wellbeing and even lives of people around the world. As the US president, Bill Clinton, told an audience during a speech in 1998: "This is not one of the summer movies where you can close your eyes during the scary parts."

The computer industry's response involved a massive software rewrite, with official "Y2K ready" certification issued after extensive testing. Different solutions were implemented for different systems, depending on their memory capacity. The best option was to store years as four digits. Where that was not possible, programmers might instruct a system to treat, say, dates between "00" and "50" as being in the 2000s, and years between "51" and "99" as being in the 1900s. This at least allowed systems to keep functioning.



## *Mission: Eradication.*

More problematic were embedded systems where the Y2K issue existed in hardware rather than software. In such cases, the only solution was to replace the hardware itself. Estimates of the total cost for Y2K preparation came in at around US\$300 billion, or about US\$460 billion (£351 billion) in today's money – plus a few more billion spent on addressing issues as they arose after the turn of the century.

## *The Big Easy?*

When the fateful day came and went with little more than minor problems, the questions started. A view took root that Y2K had been overblown – perhaps, for instance, to guarantee a giant pay day for programmers. People could point to the fact that some countries, such as South Korea and Russia, had got away with doing little to mitigate the problem, not to mention small businesses.

But this ignores the fact that software patches for the bug were rolled out worldwide. Those who didn't prepare were protected thanks to the efforts of those who did. There is ample evidence, thanks to preparedness exercises, code reviews and the like, that if not addressed, the impact of Y2K would have been much more significant.

Unfortunately, the contrarian view has wormed its way into other important areas of policy. Climate change deniers and anti-vaccination activists often raise the lack of impact of the Y2K bug as evidence that experts are not to be trusted. If we are eventually successful in dealing with problems like climate change in future, don't be surprised if similar arguments about wasted time and effort appear.

By that time, the same people will probably also be able to point to a couple of sequels to the millennium bug that didn't come to much either. As I mentioned above, ancient software systems still exist which treat all dates with two digits greater than "50" as occurring in the 1900s. While most of them should be retired before we get to the next danger year of 2050, the likes of mission-critical systems can be notoriously long-lived.

We can also look forward to the year 2038 problem. This relates to the fact that Unix systems historically stored dates and times as sequences of 32 ones and zeros, interpreted as the number of seconds since January 1, 1970. When 2038 rolls around, this number will overflow for the same reason the Y2K bug occurred. Such Unix systems again form the foundation of many mission critical pieces of software.

The Unix community is well aware of this bug, however, and most of these systems will again have been replaced long before 2038. So just like with Y2K, if the world survives these future problems, it will not have been because it was all hype. The more boring truth is often that a stitch in time saves nine. Sorry to be the bearer of good news.



## *Coronavirus*

As recently posted by [sxthomson@postmedia.com](mailto:sxthomson@postmedia.com) in The Guardian,

A group of economists studying how South Korea fought the COVID-19 outbreak without stay-at-home orders found that the country still experienced significant job losses in a pattern similar to that of countries that imposed lockdowns.

The study, from economists at Seoul's Myongji University, Queen Mary University of London and St. Louis's Washington University, also suggests that Canada's slowly reopening economy may not go back entirely to normal as long as the virus is still prevalent.

"At most, half the job losses in the United States and the United Kingdom can be attributed to lockdowns," the economists argue. Most job losses came from reduced hiring by businesses and a significant amount of non-participation in the labour market, rather than unemployment.

The same types of workers are feeling the effects, whether their country implemented a lockdown or not, the study claims. Less-educated workers, young people, workers in low-wage occupations and the self-employed lost were hardest hit, even when researchers controlled for industry effects that might over-represent these people.

“Lifting of lockdowns may lead to only modest recoveries in employment absent larger reductions in COVID-19 rates,” the paper warns.

Sweden is in deep economic crisis despite soft lockdown, as per capita deaths rise.

Cautions accompany Canada’s slow emergence from COVID-19 lockdown

The case against lockdowns: Can we fight the COVID-19 outbreak without confining people to their homes?

The economists looked at labour-market effects in South Korea, where no lockdown was imposed, and compared the economic impact across different areas. One particularly bad local outbreak allowed the researchers to estimate that one additional infection for every thousand people causes a two to three per cent drop in local employment.

“*Fighting the COVID-19 outbreak without confining people to their homes?*”

“The best way to revive the labour market is to eradicate the virus,” reads the paper by economists Sangmin Aum from the Myongji University in Seoul, Sang Yoon (Tim) Lee from Queen Mary University of London and Yongseok Shin from Washington University in St. Louis.

The study manages to untangle the many different factors in unemployment by concentrating on a localized outbreak in South Korea caused by a notorious event that spiked the transmission rate in the country.

In mid-February, the country had only 30 infections, but “Patient 31” attended a religious gathering in the city of Daegu. Ten days later, the country had more than 3,000 infections almost entirely clustered around Daegu. More than 60 per cent of them were traced back to that single gathering.

South Korea managed to quash the outbreak and maintains one of the lowest death rates in the world, mainly due to widespread testing, a robust contact-tracing regime and comparatively intrusive tracking measures, including monitoring quarantine-breakers with electronic wristbands.

People wearing masks walk at Myeongdong shopping district amid social distancing measures to avoid the spread of COVID-19, in Seoul, South Korea. Kim Hong-Ji/Reuters

The study is a working paper released for discussion by the National Bureau of Economic Research in the United States before peer

review. Although working papers haven’t gone through the rigorous publication process, they are a timely way to compare the results of the COVID-19 outbreak around the world.

Countries that didn’t implement a lockdown have also suffered economic damage from the pandemic due to the disruptions in global travel and trade.

Sweden, which kept most schools, businesses and restaurants open after experiencing its own COVID-19 outbreak, is still expecting its economy to contract by seven per cent this year. Sweden’s exports depend heavily on demand from other countries, many of which went into full lockdowns.

Therefore the research shows that the world is truly interdependent. Sweden may have continued working but its brothers and sisters were on lockdown leading to less demand for the good made. We as a global village have to work together to deal not only with health catastrophe’s such as covid 19 but even for other problems affecting the world as a whole. It is therefore important in as much as we localize our solutions to keep tabs as Humanity.



# A HOT COLD CHAIN

By Dr. Kinyua Muriithi

*The world's gaze today is on the timeline for development of coronavirus vaccine.*

The proportion and value of pharmaceuticals requiring cold chain handling has increased tremendously in this century. This growth has mainly been driven by the success of \*monoclonal antibodies that are now offering solutions in the treatment and management of previously intractable cancers and hereditary diseases and expanding offerings in vaccines.

It is estimated that the sales revenue for patent drugs in the year 2024 will be equally shared between biologics and small molecules. Low and middle income countries will not be left out of this shift due to emergence of biosimilars (the generic options of patent biologics) and loss of patents of some leading biologics.

*monoclonal antibodies that are now offering solutions*

- Humira® (adalimumab), a bestselling monoclonal antibody authorized for treatment of several inflammatory conditions like rheumatoid arthritis, ulcerative colitis, and Crohn's disease, is already facing serious competition in Europe from a number of biosimilars which will soon make landing in Kenya after a detour through India and/or China.
- The world's gaze today is on the timeline for development of coronavirus vaccine.
- This will add to the demand for cold chain logistics still expanding to accommodate vaccines against Human Papilloma virus, Ebola, and paediatric and adult Pneumonia. However, drug regulatory authorities regularly uncover deficiencies in the way manufacturers, wholesalers and retailers handle drugs requiring cold chain in the supply chain therefore putting patients at risk.

The vaccine cold chain has been most studied due to their criticality in controlling diseases with epidemic and pandemic potential and also due to the availability of funds from donor agencies geared towards improving the vaccine cold chain. It is estimated that up to 75% of vaccines are exposed to temperatures outside the recommended range of 2-8°C, with most excursions occurring during transportation. It is worth noting that the vaccine cold chain in Kenya is mostly public led and well financed with cooler boxes and monitors.

The situation in private, for profit supply chain which mostly handles non vaccines (with the exception of rabies vaccines where the private sector takes the lead) products must be worse. A 2015 study by the World Health Organization (WHO) on the quality of Oxytocin on sale in select Low and Middle Income Countries (LMICs) including Kenya revealed that 64% of the samples had at least 1 deficiency, with most failing on assay; meaning the brands could not deliver at least 90% of the units in their label claim.

Oxytocin is an essential drug and is the utero-tonic of choice. It is cheap and effective. Substandard doses of Oxytocin however put many mothers at risk of death due to post-partum haemorrhage, a major cause of maternal deaths. In Nigeria, a 2018 study by Anyakora and his colleagues working for the United States Pharmacopoeia and the Nigeria Food and Drugs Authority (NAFDAC) found that 70% of samples of Oxytocin from retail and wholesale pharmacies were substandard. Poor storage- in broken fridges, power outages- was identified as the probable cause for these deficiencies. Failure to maintain cold chain of oxytocin can therefore waste the efforts of governments and reproductive health rights campaigners in promoting hospital deliveries as a panacea to the high maternal mortalities reported annually in Kenya.

Why do biologics like Oxytocin and Insulin require such precision as concerns temperature? Unlike small molecules (paracetamol, aspirin, diclofenac), biologics are macromolecules which have higher order structures formed from association of primary units. Stabilization of these structures is the major headache in formulation of biologics and the Achilles heel in

maintenance of quality in the supply chain. This physical instability that leads to loss of higher order structures is referred to as denaturation. A denatured protein drug readily form aggregates which may have less solubility than parent drug and therefore precipitate out of solution.

Aggregates have been demonstrated as a cause of adverse drug reactions occurring with use of biologics. Clear solutions of biologics may become cloudy when aggregates and precipitates are formed. Chemical degradation of biologics happens through bond breakage or new bond formation. Deamidation is the main degradation pathway. Other chemical processes like proteolysis, oxidation, and racemization can also occur.



“*Oxytocin is an essential drug and is the utero-tonic of choice.*”

Zinc insulin has best stability when formulated as hexamers. These hexamers have been observed to transform into dimers and monomers when exposed to high temperatures of 60°C and above. The primary and secondary forms are more prone to further physical degradation through aggregation especially at inter-phases. These processes can also occur at lower temperatures of about 30°C when the insulin is so exposed for a longer duration of time.

A study in India found that NPH Insulin lost 14-18% of its potency after exposure to temperatures of 31-37°C for 28 days. Heat stress promotes aggregation of oxytocin monomers and dimers too. Deamidation of Oxytocin at Gln9 and Glu4 position is accelerated by high temperatures.

Do our wholesalers meet cold chain requirements during transportation of products from their premises to retail clients? Have the guidelines published by Pharmacy and Poisons Board (PPB) last year which require wholesalers, inter alia, to use validated containers and carriages, monitor and record transit temperatures been complied with? Results from a small study are in and they are bad:

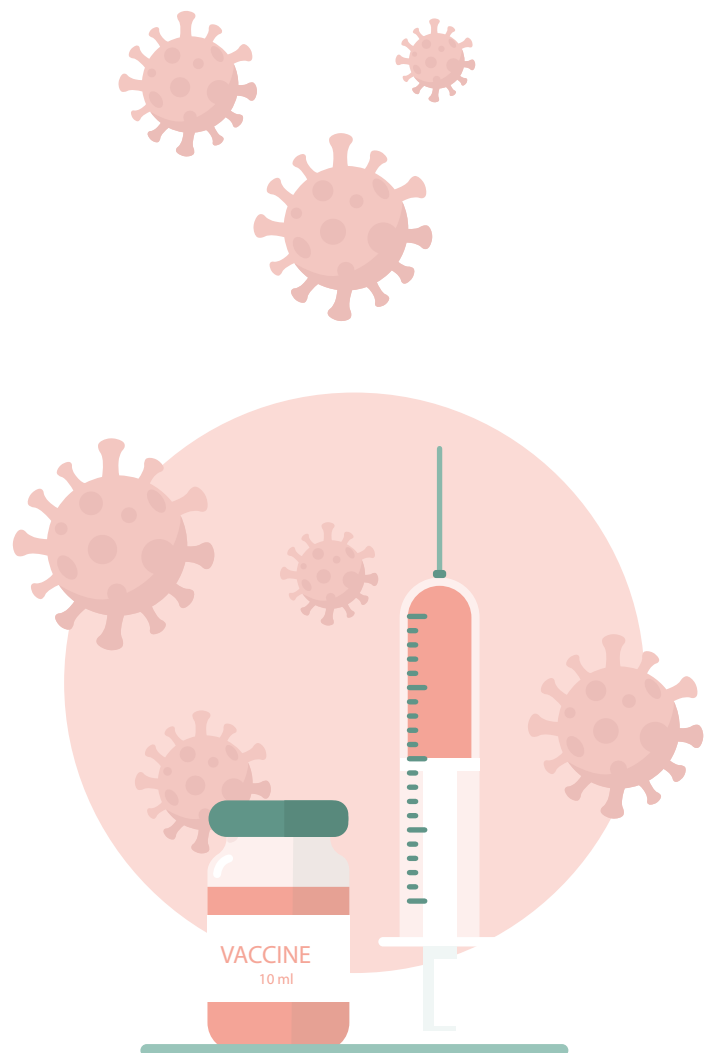
None of the shipments attained or maintained cold chain temperatures. Products were exposed to high temperatures of up to 29°C. What this means is that the quality of Mixtards, Humalogs, Verorabs, Oxytocins, etc in our pharmacies, hospitals and clinics cannot be guaranteed. They are adulterated within the meaning of Sections 11 and 12 of the Food, Drugs and Chemical substances Act for having been held in conditions deleterious to their quality, efficacy and safety.

What should be done about this? PPB must enforce the guidelines in place. I however do not expect much on this front as those guidelines were done for purposes PR or to tick a box. The Good Distribution Practice (GDP) unit at PPB has always been held by staff considered lacking in integrity and competence. It is time that owners of community pharmacies started demanding quality from wholesalers. This can start by demanding that cold chain products are packed in cooler boxes or Styrofoam lined boxes

and that each shipment has a data logger that can display the trip temperature. I remember a young pharmacist at Laborex demanding this of us in my past life in a distributor.

The crude packaging of products with ice cube, ice packs, frozen water in a bottle and product held in place using tape must end. Marketing Authorization holders must take keen interest in how wholesalers handle their products failure to which they will soon find themselves embroiled in legal suits like has happened to Eli Lilly.

\*Monoclonal antibodies are laboratory-produced molecules engineered to serve as substitute antibodies that can restore, enhance or mimic the immune system's attack on cancer cells.



# Is the medical field ready for Technology disruption?

By Mr. Mohamed Shariff

The medical field has been one of the few fields that has been spared of the spectre of technology disruption. All other fields such as Finance, retail and entertainment have all been disrupted and transformed to a great extent by Technology, the medical field seems to have somehow missed out on the same. Many reasons have been given as to why this is the case including the conservative nature of field and the majority of the players in it.

There has also been a raging debate as to whether the practice of medicine would fare better or worse with adoption of technology. There are arguments being made by either side of divide with the pro-technology side arguing that its use can make doctors more effective, reduce guess work and human error while the other side argues that human touch is the most important aspect of medicine and technology may impede that aspect.

*While the debate rages on, various reasons have been given why the disruption hasn't happen yet. Some of the reasons are as follows. Resistance by practitioners Many professionals in the medical field have been resistant to technology due to various reasons. Some doctors see its use as a bothersome task that slows down their work. This concern is especially true for those practitioners who are not very tech savvy. Other practitioners view technology with suspicions are worried that its impersonal nature may interfere with their relationship with the patients and ultimately banish them from the provision of healthcare.*



## Data Security

Medical information is usually regarded as a highly confidential piece of information and doctors are bound by their professional ethics to ensure this information is protected. They therefore feel the use of technology increases the risk of data breach and loss of confidentiality.

While there are many reasons beyond those listed above as to why the healthcare sector has been slow to modernize, the case for adopting technology cannot be overemphasized. This case has been bolstered by the current COVID-19 pandemic and its attendant restrictions that has shown the limits of face to face doctor patient interactions.

## Is COVID-19 the Eureka Moment

COVID-19 has been seen by many as the panacea that will cure the healthcare sector's resistance to technology adoption. There are already promising signs in this regard as established hospitals and startups scramble to offer technology enabled healthcare services.

Only time will tell whether this is a passing fad or the trend will take root and endure. As the push to use technology to provide healthcare continues, these are the most promising applications of the same.



# *Eureka Moment*

Artificial Intelligence (AI)

## **Virtual Health**

This has been necessitated by the restrictions on movement due to COVID-19. Using technologies such as Video Conferencing doctors can attend to patients who are in a remote location. Such technology will be beneficial even beyond COVID-19 as it offers patients access to health-care services from the comfort of their homes saving them time and other hustles. The benefit will be greater for those patients for whom it is not advisable to move. Other benefits of this technology include access to medical expertise that may not be available within the patient's locality.

## **Internet of Things (IOT), Artificial Intelligence (AI) and Wearable**

The combination of Internet of things, Wearable Technologies and Artificial intelligence will

revolutionize long term care services. These technologies will allow real time monitoring and reporting of patient's conditions. AI will provide pattern analysis and instant recommendations, thereby providing timely intervention even before the patient visits or interacts with a human doctor. These early interventions can improve the quality of care and significantly improve the outcome for the patient. This has happened to other fields and industries and it is only a matter of time before healthcare succumbs to the tide of technology and gets disrupted. The only question is: Who will be leading this charge and become the next titans of technology entrepreneurship?



# ACNE

*The acne bacterium lives on everyone's skin*

*Feature By Dr. Alexander Muchugia*

Acne is a skin condition and the most common is acne vulgaris. We will discuss this today and we will look into the other type latter. It is a long-term skin disease that occurs when dead skin cells and oil from the skin clog hair follicles. Typical features of the condition include blackheads or whiteheads, pimples, oily skin, and possible scarring. It primarily affects skin with a relatively high number of oil glands, including the face, upper part of the chest, and back.

The resulting appearance can lead to anxiety, reduced self-esteem, and, in extreme cases, depression or thoughts of suicide. This condition is very common among teenagers and I recall during my teenage years suffering from the same (I am of the male sex). It was very visible for me as I am of a light skin complexion. It definitely affects the self-esteem of teens as it's a period through which they are experiencing a lot of body changes and they are quite conscious of the same.

The cause of Acne isn't quite well known but it's postulated to be somehow related to hormones. The sebaceous (oil-producing) glands of people who get acne are particularly sensitive to normal blood levels of certain hormones, which are present in both men and women. These cause the glands to produce an excess of oil. At the same time, the dead skin cells lining the pores are not shed properly and clog up the follicles. These two effects result in a build-up of oil, producing blackheads (where a darkened plug of oil and dead skin is visible) and whiteheads.

The acne bacterium (known as *Propionibacterium acnes*) lives on everyone's skin, usually causing no problems, but in those prone to acne, the build-up of oil creates an ideal environment in which these bacteria can multiply. This triggers inflammation and the formation of red or pus-filled spots. Some acne can be caused by medication given for other conditions or by certain contraceptive injections or pills (clearly showing that there may be a hormonal cause). Some tablets taken by body-builders contain hormones that trigger acne and other problems.

The information on hereditary cause of acne is scanty and conflicting. I would however go with my medical colleagues on this one as the appearance of acne is known to be sporadic. Again skin conditions are commonly confused and seen to be localized. The skin is the largest excretory organ

and therefore Acne is a symptom of the body cleansing itself. Naturopathic sources tend to associate Acne with bad food habits, chronic constipation and any condition that leads to increase in toxin accumulation in the bloodstream and decreased excretion through the bowels.

There are many forms of treatment using conventional drugs and also dietary means. Let's start with the conventional route.

Acne treatments fall into the following categories:

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- Topical treatments, i.e. those that are applied directly to the skin
  - Oral antibiotics, i.e. tablets taken by mouth
  - Oral contraceptive pills
  - Isotretinoin capsules
  - Other treatments
- 

### *Topical treatments*

These are usually the first choice for those with mild to moderate acne. There are many agents and benzoyl peroxide is quite common. Antibiotics (e.g. erythromycin, tetracycline and clindamycin), retinoids (e.g. tretinoin, isotretinoin and adapalene), azelaic acid and nicotinamide. Care should be used with these as they can cause skin irritation.

### *Oral antibiotic treatment*

Doctors usually recommend a course of antibiotic tablets, usually erythromycin or a type of tetracycline, which is sometimes taken in combination with a suitable topical treatment.

### *Oral contraceptive treatments*

Oral contraceptive pills help females who have acne. The most effective contain a hormone blocker such as cyproterone which reduces the amount of oil the skin produces. It usually takes at least three to four months for the benefits to show. Although they may not be taken for this reason, the pills also help to prevent conception. As they prevent ovulation, they may be less suitable in young teenage girls where ovulation is not well established. These tablets increase the risk of blood clots which can be dangerous. This is a greater risk for people who smoke, are overweight or have others in the family who have had blood clots.

## Isotretinoin

This is a powerful and highly effective treatment for acne which continues to benefit most patients for up to two years after a course of treatment. However, it has the potential to cause a number of serious side effects and can be prescribed only under the supervision of a consultant dermatologist. Isotretinoin can harm an unborn child. It is likely that isotretinoin may cause depression and suicidal feelings. Acne itself often makes people feel depressed so this can lead to further complications. Details about any personal and family history of depression or other mental illness should be discussed with your own doctor and dermatologist prior to considering treatment with isotretinoin. Most courses of isotretinoin last for four months during which time the skin usually becomes dry, particularly around the lips. Regular application of a lip moisturiser is usually helpful. Often, acne becomes a little worse for a few weeks before improvement occurs. The improvement is progressive throughout the course of treatment, so do not be disappointed if progress seems slow. It should be emphasised that many thousands of people have benefited from treatment with isotretinoin without serious side effects.

## Other treatments

There are many forms of light and laser therapy for inflammatory acne but these forms of treatment have given mixed results when studied and are usually ineffective in the treatment of severe inflammatory acne. Laser resurfacing of facial skin to reduce post-acne scarring is an established technique requiring the skills of an experienced laser surgeon. Laser treatment should not be done for

at least one year after completing a course of isotretinoin. Skin camouflage can be useful for disguising changes in the pigmentation of the skin which can sometimes remain after acne has been treated.

Naturopathic and Dietary cures. As seen above the conventional treatment do come with their fair share of side effects and other issues such as depression. Though they may be considered rare there is a likelihood they do occur and may require further direction from the doctor or pharmacist. They also do take a while to work. Knowing why you have acne and what makes your body function the way it does will give your naturopath the very best idea of what to do to counteract your acne. There are many different types of acne and there are many different ways to treat it. Here are some basic treatments a naturopath might suggest for you to get started on the path to clear skin.

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*Knowing why you have acne and what makes your body function the way it does*

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## Diet

A diet based on whole, unprocessed foods is what's best for just about everyone, acne or not. The naturopathic physician will encourage you to eat a lot of green vegetables and add some fruits to your diet as well. Refined sugars will be taken off from ones meals. Taking milk and dairy

products out of your diet will lower your intake of Trans fats. Cutting out fried foods, margarine and other hydrogenated vegetable oils and hydrogenated oil products.

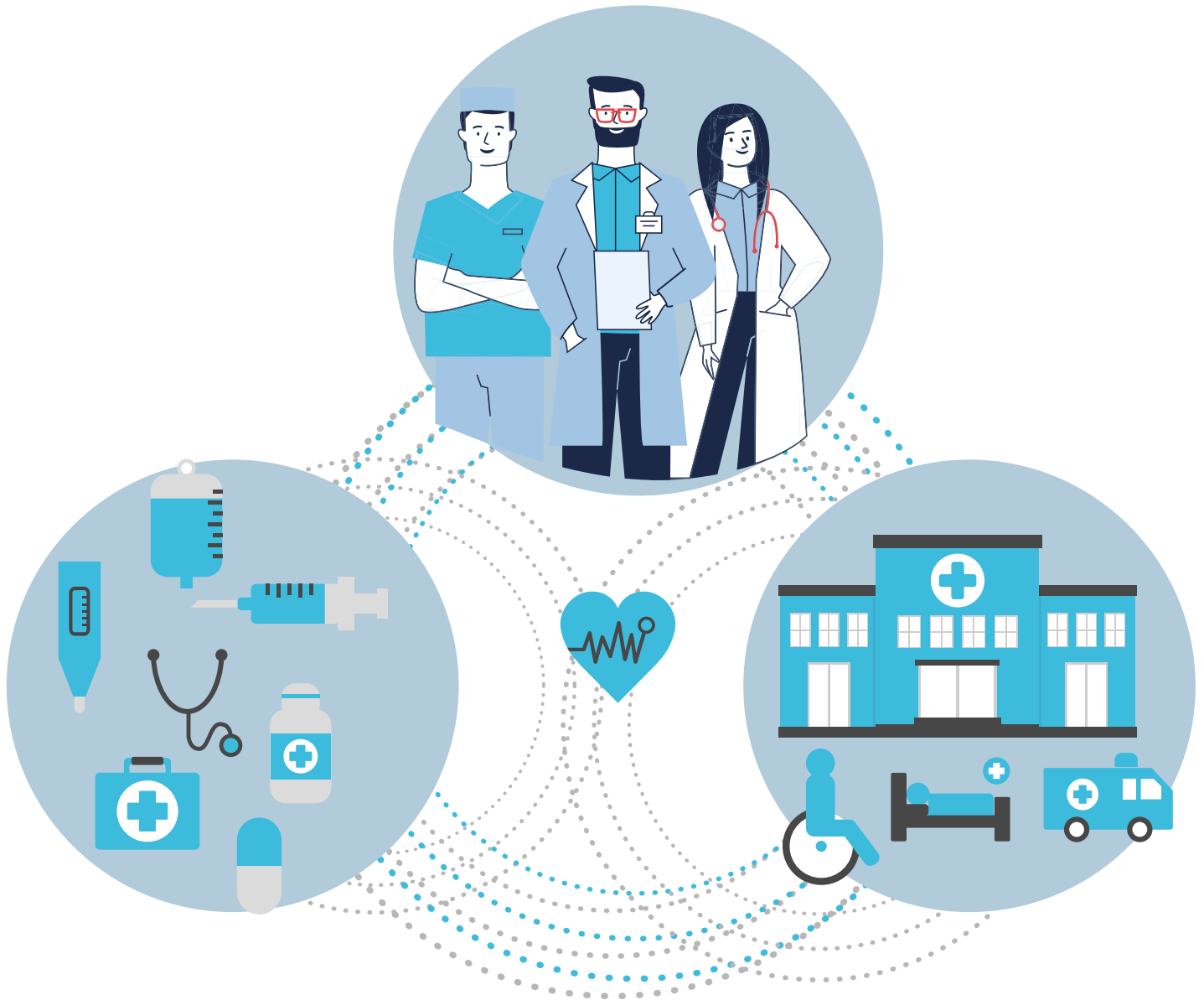
Other foods such as those containing Omega-3 fatty acids are deemed to be beneficial. Using ground flaxseed in cooking, or whole flaxseed on salads, and increasing healthy dark meat fish such as salmon and sardines, will help balance your dietary needs.

Junk foods and carbonated drinks are also no, as they exacerbate the condition. Once the naturopath has looked at your test results as well as your lifestyle and dietary choices, they will then be able to more accurately pinpoint the cause of your acne and begin treating it. Here are some things to expect once this process is complete.

## Herbs and Minerals

Herbs such as garlic, amaranth, aloe, lemon, coriander, basil, cucumber, grape, chickpea and beet might be a part of the herbal supplement prescribed by your doctor. All of these herbs have different properties that help reduce, heal and prevent acne. Each of the herbs must be harvested correctly and measured specifically to work. You can actually grow this herbs in your back yard. Zinc is very often used in treating acne and your naturopath will probably suggest a supplement of this as well. By taking Zinc supplements, inflammation and infection are reduced and beautiful glowing skin is given a chance to emerge as a result. It can also be found naturally in pumpkin seeds, sunflower seeds and white onions.

# Dawahub



*Dawahub, where demands for healthcare services and products meet technology.  
With us, you are either a provider or a consumer or both.*

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## Oils

Tea tree oil is widely used as it works. Tea tree oil is an anti-bacterial, anti-inflammatory and is great for sensitive skin as it's also hypoallergenic. It's great for acne patients in every aspect and when compared to patients who used benzoyl peroxide for the same duration as those who used tea tree oil, side effects were much less seen in the tea tree oil users. Also, using fish oil or flaxseed oil capsules internally helped to improve Omega-3 fatty acids. That increase helps you to be healthier throughout your entire body and also results in great skin texture, tone and uniform colour. Don't forget the ever important Vitamin E oil. Topically this oil will promote healing and smooth, unscarred skin. Taken internally, Vitamin E will help with creating a beautiful glow for your skin and adds the benefit of stronger nails and shinier, healthier hair!

## Acupuncture

Yes! Believe it or not, acupuncture helps the redness and other inflammatory side effects of acne. It can also reduce the size and duration of pimples. The best part of this cosmetic acupuncture procedure is that it's only needed in the ear area.

## Biofeedback

Acne is very connected to stress. Reducing stress is one of the hardest things to do in this day and age with all of the hustle and bustle of life in general today. Biofeedback or mind/ body medicine can help with this. Hypnosis and biofeedback combined with cognitive imagery can be very helpful to provide stress free times that will greatly benefit those with stress induced or stress inflamed acne. These bouts of decompressing the body help to

align the hormone and immune systems, thus relieving inflammation.

Biofeedback in itself is a technique used to teach the patient to better concentrate and understand how their body is working. Through guided imagery, the patient will learn to understand what the body goes through each time they go from being relaxed to being tense and stressed. This helps the patient to better manage their stress outside the office and in their personal life.

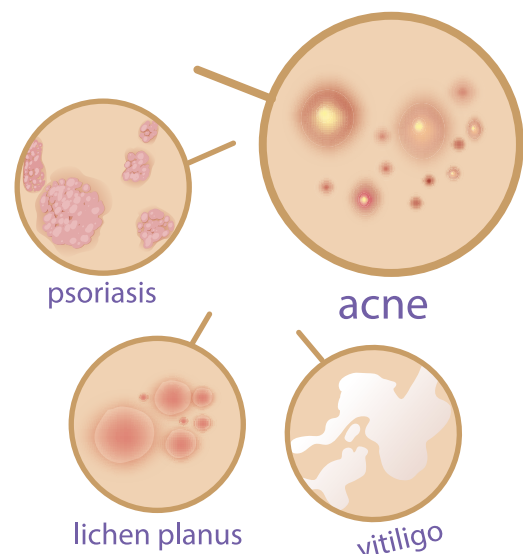
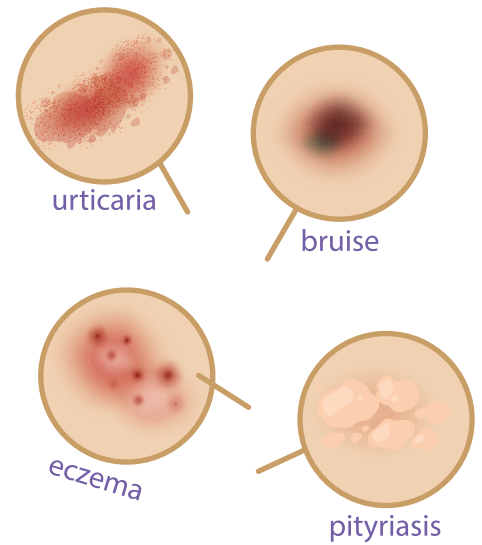
## Homeopathy

Many homeopaths have great remedies for acne. Your naturopath might suggest a specific homeopath in your area to visit. These professionals work with herbs and essential oils and are very knowledgeable about how these elements work together. They will create the perfect formula for the type of acne you have. A lot of commercial skin care products (Think Proactiv acne treatment) and even acne medications are based off these formulas.

For the best results when seeing your naturopath, remember to be open and honest. The best treatment for you is based on the information you give your naturopath. With a great diet, a healthy balance of exercise and stress-reducing activities and your naturopath's prescription, you should see great results and clearer skin. I hope armed with all this information you can make an informed choice as to which treatment best suits you.

Information Sources

1. Wikipedia
2. British skin foundation <https://www.britishskinfoundation.org.uk/acne>
3. <https://www.facingacne.com/naturopathic-acne-treatment-expect/>



# *The forgotten Medical Sciences*



*“The West carries the day in our current world with what is called conventional medicine.”*

*By Dr. Alexander Muchugia*

Medicine is considered to be a wide and broad science. On further research I would say that it encompasses even the arts. We are often told that Hippocrates was the father of modern medicine. Different cultures however had their own forms of healing and years of medical training. This should be considered as medicine. The West carries the day in our current world with what is called conventional medicine.

This entails all that is physical. We look at symptoms that have been described as a disease and use drugs or surgery for corrective measures. It does work very well for acute and emergency conditions however chronic conditions are better

solved with other forms of medicine. This is because these conditions are insidious and take time to develop. To merely treat symptoms is to cause long term suffering and effects. This is because pharmacological agents are known as poisons and using them for long period's leads to toxicity as opposed to healing and restoration of normalcy.

Today my story is different. It's about behavioural sciences and how they have been forgotten when it comes to our conventional medicine. Imagine walking into a doctor's office. He doesn't say hello. He asks for the file from the secretary. Immediately he asks you to sit on his examination bed and

does a checkup. Then he sends you to a lab and after tests gives you a diagnosis and then sends you off with a prescription. Take another doctor who says hello warmly, asks about your family before gently asking you to get on the examination bed. He also follows up with the other tests but he has a human touch to what he does. Who would you prefer to be your doctor, the first doctor or the second? Imagine if all the hospital staff behaved like that? I doubt anyone would go to the hospital even if they were dying!

What is behavioural medicine? This is a wide discipline just like medicine. It involves several disciplines such as psychology, sociology and anthropology. Miriam Webster defines it as a branch of science (such as psychology, sociology, or anthropology) that deals primarily with human action and often seeks to generalize about human behavior in society.

The Collins dictionary describes it as the application of scientific methods to the study of the behaviour of organisms. I prefer the Webster definition as it encompasses more of what we do as medical practitioners. Psychology deals with matters of the mind. In fact there are many conditions if not all that start from the mind. Stress can affect how we get ill, all the way to the process of healing. Sociology is a larger study to do with our way of life, religion, politics etc. I am glad that I studied it though many years ago.

It has colored how I interact with my patients today. Anthropology is the study of culture. Certain cultural practices impact disease. A case scenario is one of a patient from the village who doesn't understand the national language, how do you treat this person? You may require a translator who doesn't understand many medical terminologies so this affects the communication. My background is pharmacy where I do interact directly with clients. I recall a case where a patient suffered from vaginal candidiasis (fungal infection of vagina). So the pharmacist who was dealing with it told her in kiswahili, "achukue dawa na aweke pale chini." The patient interpreted this to mean take the medicine and put it under the bed. Now the patient never got healed because they followed the wrong instructions. It's the medical practitioner's responsibility to make sure the patient understands how to use medicine or a technique appropriately. They may even need to use props as they do in teaching about HIV/AIDS prevention. They teach people how to use condoms effectively, through props.

I will sign off with one more insight about the behavioral sciences and how they affect our modern medicine practices. A friend once shared his community's form of medicine. They have been able to cure diseases through what we call alternative medicine. I would actually classify it as energy medicine. Our body is an energy system and therefore how we manipulate this energy can either heal us or continue the disease over a long period.

In Africa it's been classified as witchcraft by those who understand little. I now see the same being practiced in Europe, USA. It's been practiced also in Eastern cultures such as China and India and with great results. I would therefore urge any institution which does medicine to investigate these methods and add them to the current conventional medicine as a way of healing our patients. In many western countries it's now being embraced and is referred to as holistic medicine. This will improve our medical outcomes and also open up other areas of practice as opposed to our current system. I believe in the coming months we will properly demystify this topic but I hope for now, I have been able to give a nice introduction to the forgotten sciences.





# BEING FOOLS AND EXPOSED

*By Dr Gilchrist Lokoel*

## *Corona Virus Has Made All Human Beings Fools And Exposed Their Folly.*

The highly rated, extensively advanced and technologically savvy nations and the so called backward, shithole, corrupt and war torn countries have all been tried by Corona Virus and found wanting. They are all tinkering at the slope edge of socio economic and survival dilemma courtesy of a newly minted virus that jumped from a bat to man and propagated by the same man who the other day was feasting on exotic cuisine of bat soup in Wuhan.

Nations that had conformed to Abuja declaration by allocating 30% of their budgets to health care, nations that had little investments to health care have all been caught flat footed as the new ferocious disease sweeps across the globe with wrath and fury of a demon.

Human kind is scared. Confused. Anxious. Information from the science labs is trickling slowly and at times conflicting. Increasing the uncertainty and anxiety of the populace.

Human capital is quickly being decimated faster than anything we have seen. In just three months, close to a 12 Million people are infected and more than five hundred thousand dead. We had invested in these people and now their bodies are carries on army trucks and relatives cannot even fully mourn and bury them in peace because of restrictions that have been justifiably put and fear that pervades knowing that you could be next. Worse still, in most parts of the world, the curve is still rising and this monster has not burned itself over like a wild fire.

The pressure in the health Care system has been felt. In Italy, the sheer weight of large number of patients is breaking down it's health care system. Germany is relieving some countries by airlifting some patients and managing them in their country. Residents there are worried that when their ICU beds will be used to manage patients from other countries, what would happen to them when they will need it. A good question that is moral in nature. In Kenya, about 24 counties don't have ICU beds. So what happens when cases increase mid month? We are all interconnected as countries and counties and we must think collectively and stop this silo thinking.

May be it's high time we realize as humans that our future as mankind is not in war and conquest where we allocate huge sums of money to defence but to health. So all the military hardware, (which I know and understand are important) cannot shoot down Corona Virus at present.

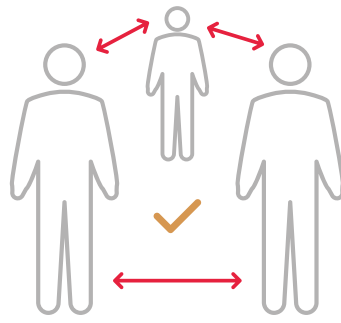
The laughable thing about all this fiasco is it's control lies in our individual personal discipline.

1. Wash hands.
2. Avoid crowds and observe personal discipline.
3. Cough hygiene

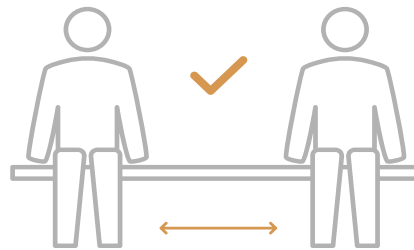
This has proved difficult for mankind to observe inspite of all the advancement that he has created.

Simple things have paradoxically become complex for him. Including even adhering to a night curfew.

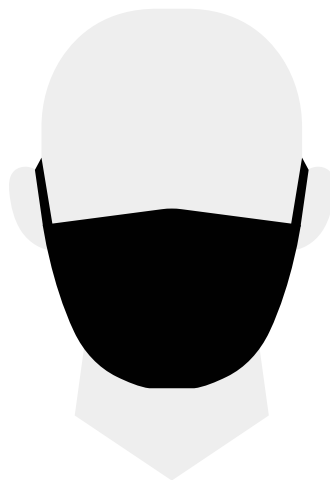
Even working from home has become a herculian task for him.



## STAY HOME



## SOCIAL DISTANCING



## WEAR A MASK

## WAY FORWARD:

1. All critics, naysayers, human right activists should tone down a little bit and allow us to look in one direction. Government should provide lead and strong direction now for the larger good. We don't need to challenge our Government in everything. Spain did it and they are now reeling in a quagmire of high mortalities and morbidities of SARS - COV - 2.

2. Let countries stop silo thinking of America first, Kenya first etc. Let's think collectively and help each other with ICU beds, trainings, supplies and research. Or else we shall all perish as fools.

3. Industries should reduce their profit making ventures and start dedicating part of their time and resources in making equipments and supplies to fight COVID - 19. Food supply channels should be kept open and other essential channels for survival of mankind but essentially COVID - 19 should take priority in manufacturing.

4. Research and innovation should be encouraged. Let scientists be given resources to sit in their labs and crack this puzzle. Those boys and girls like to play in their labs and they will have a field day coming up with a solution. America did it when they invented atomic bomb that became a game changer in World War 2. They should not rest or allow sleep to butt their eyelid until a cure is gotten unlike the current helter skelter approach.

Let's all embrace the Ubuntu slogan that:

*I am because you are - keep your loved ones and country men safe by staying at home and observing hand washing and social distance.*

Above all, pray that our God will show us the way.



*We against the virus*



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