



Dr Karthik Anantharaman

Vice President of International
Apollo Hospitals

TECHSCI RESEARCH
from NOW to NEXT

Based on your profile, in the last few years there have been too many terms used such as e-health, m-health, e-pharmacy, digital pharmacy, can you differentiate the terms?

In healthcare, there are multiple business verticals that can be digitalised or that can be reached to end consumers using technology. So therefore, these healthcare verticals or business verticals are more amenable to tech neck consumption from a consumer perspective, that is, pharmacy and therefore somebody that's focusing exclusively on medicine deliberately at home is someone that is identified themselves as e-pharmacy. The second is Lab services where someone who's offering a phlebotomist to come home and collect a blood sample, a tissue sample, the stool or urine sample, etcetera, then is taken back to a central processing lab and then have the report generated and sent out to the treating doctor and the consumer as the patient. So, they would recognize themselves as an e-laboratory. Someone that is focusing and exclusively specializing in getting consultations with doctors done either on a voice format or voice with video enabled format and this could even either be a first consultation or what we call a first opinion or a second opinion or even a third opinion in some of the specialty cases they would recognize themselves as a Tele consultation company. And eventually someone that's actually able to explain insurance products, which includes outpatient insurance, inpatient insurance, overall coverage inclusion and exclusion within private insurance or health insurance sector per se, they would recognize themselves as e health insurance, providers or vendors. Now there is always an opportunity to integrate a pharmacy, a lab, a consultation, and an insurance in, technology like organization into one integrated E health platform. So therefore, in my understanding and in my area of work, we always define E health as an integrated platform that is able to deliver multiple value propositions across pharmacy, lab, consultation, and insurance.

How do you feel about the integration of the healthcare sector in the growing use of ICT or the integration of these two?

From a tech perspective it is easily integratable. I do not see a challenge as it is easily integrated at an API level, most important thing is what is the experience that we are providing to the end consumer? So, to an end consumer or to a patient, you know one of the things that used to be a challenge in the past, especially when one company acquires another company is that companies used to be on two different types of tech platforms which do not essentially talk to each other. Now what did that led to? So, from



a consumer experience perspective, if a customer wants to go first as a set of medicines or drugs in the cart, the customer could not go back and await a lab service and add the lab service to the same cart. So, the customer has to first check out, finish one transaction and then go back and search for the lab, finish the lab transaction. So therefore, every you can say sub vertical as a business which had to be checked out separately at separate points in time from our cart, which is not essentially a good consumer experience. So therefore, what we did was we came up with the concept of an integrated Storefront and what happens in an integrated storefront is essentially that each medicine be it the lab investigation, be the consultation request with a specialist doctor, or create an insurance product you could add everything that you need as a consumer at once into a cart and checkout at once. So that gives you an integrated experience from the e-health platform, which is what has seemed to be the most you can say customer friendly, approach that uh, any consumer would like.

What kind of challenges did you face during the functioning of e-pharmacies?

I think in term of operations and business model, e-pharmacies has gone through quite a bit of transformation. Traditionally e-pharmacies always had capital intensive, and they were asset heavy. So traditional operation model of e-pharmacies always had the establishment of fulfilment centres, which are typically large warehouses that are in different parts of the country that need pharmacy to serve and then the e-pharmacy was just to deliver to and also industry was at a stage where it was going through revolution where there were no set guidelines or regulations of do's and don'ts of running an e-pharmacy. So therefore, Association of Premise and Progress which is the association of the offline pharmacists, they did not want the e-pharmacies to thrive. They did not want the e-pharmacies to grow. So, there was PICD wanting the government to ban e-pharmacies which is if you ask me very uncalled for because the online and offline pharmacies have



always co-existed, one will not eat into each other. There is a consumer for online, there is also a consumer for offline and they will coexist the same way how it happened in retail. So, ecommerce and retail never led to the closure of shops or malls, so they continue to thrive together, which is the same thing that happens in health or pharmacy as well. There are always health consumers that would go online that would never buy anything online and there are always consumers that would go offline and buy thing online and, there is a hybrid which would do both. So therefore, nobody would eat into each other's business. But in early days it was a reactionary thing from the ICD such as there should not be any e- pharmacies, there shouldn't be license given to e- pharmacies etcetera. But of course, a lot of water has spoken of the bricks since then, E-pharmacies at that time were banned from directly sourcing or procurement products from manufacturing company, pharmaceutical companies and therefore e-pharmacies during that time were forced to set up a holding company. Consider this holding company more as a middle distributor. So that holding company had to 1st procure it from the manufacturer in offline format like a traditional format distributor and that holding company had to further redistribute the stock into the various fulfilment sections or the warehouses that the e-pharmacies had to deliver. So, this brings in taxation issues. and logistical issues of potential delay because it has move from one main, let's say mega warehouse into multiple small warehouses which will typically take anywhere between 24 to 72 hours and 24 hours is too long for a healthcare consumer to wait and that used to lead to a lot of order cancellations. However, times have changed significantly in the last four years, now the regulations have changed significantly. There is no need to have a holding company, any e-pharmacy can directly get from pharma manufacturer. The entire operational business model of free pharmacy has changed significantly. There is no need to really now have a fulfilment centre or a warehouse which is a very asset heavy, or you know stock.

heavy business model. Rather people now go ahead with an existing offline pharmacy, which become an aggregator of existing offline pharmacy and use the offline pharmacy as your starting centre and deliver from there. So that makes any pharmacy or more of a technology integrator without the need for carrying inventory, so it's an asset like tech integration layer model which makes it profitable sooner. Therefore, that gives us an opportunity to truly define and have a Omni channel presence rather than having a pure fulfilment centre which led online because it's quite capital intensive on that format. The third most important change for development that happened is technology that inventory forecasted because one of the key operational challenges that we used to face in online pharmacy, it is either under stocking or overstocking specific products or services both of which are wrong. Under stocking always leads to order cancellation because if a particular client is ordering, and we don't have the stuff we need to order from the last one from a local supplier, you get it at a higher price and your margins would be much less low. Secondly, when you have overstocking of certain products, they are either slow moving or does not demand in the market for a certain brand which used to lead to expiry and again that is not good for the bottom line. Therefore, right stocking or smart stocking as we call comes through artificial intelligence and algorithms which very clearly defined by PIN code, by geography, the consumption pattern by time and it gives you a very clear recommendation that these are the only brands that you need to stock. It also gives you a recommendation on how many days of inventory do you need to buy from the manufacturer. So, I think that you can say in data and insight lead procurement is a significant new way of getting supply chain and logistics that we have seen that is emerging in the past say 1 1/2 to two years, which reduces or rather optimizes operational cost to operating stream. these are the three major things that I see that have changed in the last four years.

Do you think the shortcoming faced by the traditional methods we evolved into the new format of the E pharmacy?

Yeah! I think all the shortcomings were related to operations have been asset heavy, less smart in terms of predictive analytics around inventory, inventory procurement, inventory holding and inventory management and the most importantly, you should have a very clear promise to the customer. Also, I can tell you some fantastic models that work well for instance, we acquired the company called Myra. Now, once before we acquired Myra, Myra had a very clear value for the customer because it's like indigo, so Indigo Airlines standard USPS on time, every time. So likewise, Myra had a very, very clear value of that delivery through our slack or your order this week and they make sure that 99% of their orders were delivered within two hours flat within a restricted pin code. Now there's a way to succeed in this model but we'll have to call out exclusions very clearly in these models. So, they were very clear. Number one, we'll operate only very limited Brands. Secondly, we'll have a limited catalogue, will not sell the word. We will only sell 100 medicines. Customer is very clear that if they need any one of these 100 medicines and if I live in any of the big course, please specified, yes, I'm guaranteed to get it within two hours flat, and they stuck to that promise, and they delivered. They were super successful there and their valuation went up significantly during that time. So, I think defining that very clear value prop and deliver on it is all that is required, even today customers don't expect anything more than that.



Do you think that because of the emergence of so many e-pharmacy companies in the country and lack of proper regulations, there has been increased supply of counterfeit drugs in the market?

Yeah, I think the emergence of new e-pharmacies is good for the industry because even as we speak today, we pharmacy is different, 3% of the total Indian farmer market and it's quite similar across the world. Even in the other markets we the US or in Western Europe, E pharmacies are among the fastest growing, but still from an overall representation from our value and a top line perspective are still about 3% of the total market or less than 3% of the total market in terms of value. So, there is enough headroom for everyone to grow. However, what is very important is that the one is regulation, very clear regulation, which fosters the growth of the e-pharmacies. Secondly, the most important thing is to find a niche but to find a very clear understanding for us and an undifferentiated e pharmacy will find extremely difficult to survive in current environment., Therefore, I can give you an example such as India's first, healthcare app in Hindi local “ Looka Lab” Now, that was their claim to fame. The second thing again example I would give is that of UDAAN. Now UDAAN basically is a combination of two things. They have English and Hindi, but they very clearly defined themselves as a B2B market.

place where you are able to negotiate bulk deals for B2B healthcare products and also be very clear on what's the price point at which you wish to procure them also. So therefore, it's very important, if you ask me to define your value proposition very clearly to the consumer at stick to it and deliver it right. Also, most e-pharmacies traditionally if you see three to four years ago were all giving discounts. So, if someone is giving a 15%, somebody who has more attached to burn will give it 20%, somebody who has even more money to burn will give 30%, but there's not a sustainable gain. I think consumers are really not much hooked on discounts anymore. What consumers need is an assured quality of product and consistent quality of product delivered in the shortest path time possible. So therefore, a true value prop going forward is number one time to delivery. Any, any medicine that is delivered in two to four hours flat is considered good. Anything that takes beyond four hours is, I mean it's like gone are the days that you and I would sit and watch it 50 hours', cricket match.. So, I don't think we have the time to do that anymore. Therefore, two to four hours is the technical type to delivery for any health platform, anyone who's not able to keep up that time is really out of the game. Second limited catalogue, but in the limited catalogue, 100% fulfilment and 100% delivery, that's the second important promise. Third is the integrated storefront, ability to add multiple types of Techwire services to a single target with a single check out. It is a very important feature to our consumer, the consumer journey on the app for the deck platform from that perspective. And #4 is basically what we give as combo deals or combo subscription deals. So, customers now really would like to experience you know the true value of loyalty programs in healthcare. they're now already using points or cashbacks, etcetera. They're expecting something similar, which is where instead of a cash back utilizing e-cash or being able to be reading e-cash for cash discounts on total bill before checkout are things that will actually entice customers. And #5, a lot of companies are now starting to think of integrating Wellness apps or health app. For instance, think



There are various retail pharmacies who are coming up with their own websites and apps, but they're not actually online pharmacies because their model is of retail pharmacy only. So, is it right to categorize themselves in E pharmacies or it could be an additional offering of the retail pharmacies?

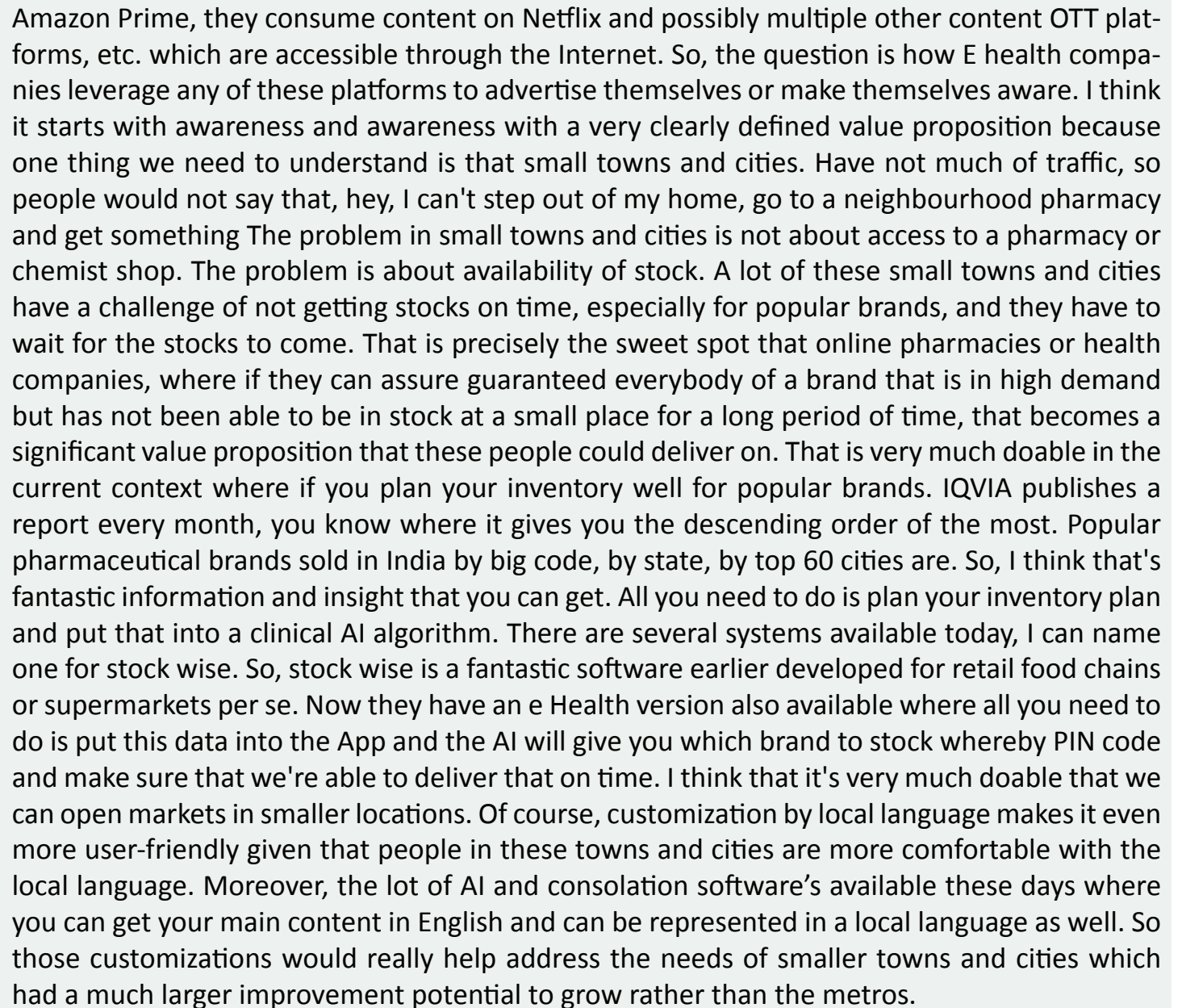
E pharmacy as a business from an operating model gets redefined as an omni channel model so naturally then omni channel will have an offline Phase as well as online phase to it, so think of any existing pharmacy in an offline mode, and think of their website or app as online phase, what it is going to do the conventional medical officer who has a local shop is, he will have customer who will walk in the store and buy what they want according to prescription. In addition to that it will new set of customers who didn't come to buy to the store, these people will prefer buying online, so it will create new set of consumers. But these retail pharmacies with online services are not sustainable as they are not able cover the larger geography within a city.

about integrating an Apple Phone which basically measures physical activity and a couple of other parameters into an E health app where if someone is able to lead and you can say a lifestyle which is you can say good with physical activity, good on nutrition, hydration, sleep, etc. that has its own reports as well, which is what some of these integrated health platforms are kind of getting. So, I think broadly you can say a consumer driven approach which is more B2C consumerism led approach is what is going to differentiate any health platform going forward

In India, there are various states where the number of e pharmacies is high, and some has lower number of e-pharmacies why?

I think it is about the value proposition itself. For an e-pharmacies to sustain, there are multiple models such as is their internet penetration.

Yes, Internet penetration is there in almost every part of the country now. But yes if you look at any e-pharmacy Business today, E pharmacy businesses largely are still defined only in the large cities. So, between Delhi, Mumbai, Bangalore, Chennai, Hyderabad. So between 5 cities, you see that almost 55 to 60% of the top large-pharmacies exist Of course, a few other state capitals would also add up, but they typically contribute not more than three to four or maximum 5% top line at best. So therefore, what is important is to really see that, they truly advertising themselves in the right platforms. If we go to the smallest of you can say town or village today, people are watching YouTube, they are watching content on YouTube, they consume content on



Amazon Prime, they consume content on Netflix and possibly multiple other content OTT platforms, etc. which are accessible through the Internet. So, the question is how E health companies leverage any of these platforms to advertise themselves or make themselves aware. I think it starts with awareness and awareness with a very clearly defined value proposition because one thing we need to understand is that small towns and cities. Have not much of traffic, so people would not say that, hey, I can't step out of my home, go to a neighbourhood pharmacy and get something The problem in small towns and cities is not about access to a pharmacy or chemist shop. The problem is about availability of stock. A lot of these small towns and cities have a challenge of not getting stocks on time, especially for popular brands, and they have to wait for the stocks to come. That is precisely the sweet spot that online pharmacies or health companies, where if they can assure guaranteed everybody of a brand that is in high demand but has not been able to be in stock at a small place for a long period of time, that becomes a significant value proposition that these people could deliver on. That is very much doable in the current context where if you plan your inventory well for popular brands. IQVIA publishes a report every month, you know where it gives you the descending order of the most. Popular pharmaceutical brands sold in India by big code, by state, by top 60 cities are. So, I think that's fantastic information and insight that you can get. All you need to do is plan your inventory plan and put that into a clinical AI algorithm. There are several systems available today, I can name one for stock wise. So, stock wise is a fantastic software earlier developed for retail food chains or supermarkets per se. Now they have an e Health version also available where all you need to do is put this data into the App and the AI will give you which brand to stock whereby PIN code and make sure that we're able to deliver that on time. I think that it's very much doable that we can open markets in smaller locations. Of course, customization by local language makes it even more user-friendly given that people in these towns and cities are more comfortable with the local language. Moreover, the lot of AI and consolation software's available these days where you can get your main content in English and can be represented in a local language as well. So those customizations would really help address the needs of smaller towns and cities which had a much larger improvement potential to grow rather than the metros.

What are the regulation for E pharmacy?

The regulation required for e-pharmacy is to get retailer pharmacy licenses and a physical address from where you stock and dispense medicines. It's again very important that we have qualified pharmacy graduates or pharmacy postgraduates who understand pharmaceutical medicine well to be on board every E pharmacy because dispensing of previous they're talking about dispensing medicines and hence we have to be very clear that the right medicine is getting dispensed for the right kind of prescription. So, authentication of information is key so that there are no clinical errors. The third critical thing is cold chain management because in pharmacy there are quite a few medicines and injections, especially insulin and products which are very popular in the e-pharmacies. So, they have to be, maintained or stored under cold chain within the stocking centre or the pharmacy, and once they leave the pharmacy and goes into the bag of the delivery boy, it must be still kept under the cold chain storage, until it is delivered to their consumer because. If that purchase is not maintained, then the drug can lose efficacy. If they're not, it may stop working in operation as well. So therefore, maintenance of cold chain becomes another critical regulatory factor which must be audited. Also, one should always look for expiry date before you dispense and any medicine which has less than six months to expiry should never be dispensed, should never be billed. and I think compliance to the guideline is very, very important. So, these are the only things to keep in mind. Of course, at the end of the day everything is data. Any health company is basically your technology or data-based company. And the cloud server of which they would host their data needs to be given compliant. I think these are the key regulations to conform to. Other than that, I don't see any other specific regulation or guidance.

As you mentioned about the E pharmacies having doctor consultations or pathological service providers, so is there any specific qualification required for doctors?

For providing consultation e health platform, a doctor would not need any specific additional qualification beyond their medical degree. However, there are some very specific rules for providing consultation on an E platform. There is a very clearly approved guideline for the telemedicine society of India guidelines. So, every doctor needs to undergo a formal training. All the guidelines which clearly based on the dos and don'ts for a doctor because as you know in any medical condition there are certain medical conditions where you have too mandatorily. Examine the patient's, in a clinic or hospital and only then prescribe a medicine. But for certain kind of conditions there is no need to mandate to see the patient. You can see the patient offline, and you are able to consult and give the prescription to the patient. So therefore, it is very important to go through the guideline which clearly lays down the do's and don'ts and adhere to that guideline. So that will really help in making sure that. we're not doing anything that is grossly wrong, and we are able to conform to the dos and don'ts as prescribed by the timeline. And by the way, this has been reviewed by the Ministry of Health and it's now widely accepted as a very clear rule book of sorts for any doctor to follow when it comes to offering online consultations. But other than adherence or compliance to this guideline, there is no need for any specific additional medical qualifications.



As you mentioned for like there are some OTC drugs, or they are prescribed drugs. So how does E pharmacies verify the prescriptions given online?

The regulatory or the legal guideline around prescription is prescription given by a doctor is valid only for six months, any prescription which is beyond six months of age is invalid. It must be revalidated by a qualified doctor. This is something that every pharmacy follows very diligently, and every pharmacy should be audited for this as well. So therefore what every pharmacy does is it has centre, which is actually manned by pharmacists such as B.pharma, D. pharma, graduates in these pharmacies. So, what these people do is very simple. They will basically, you know, verify every prescription that a patient would upload into the platform at the time of placing the order. There are specific products that are dispensed only with a valid prescription from a doctor. We call them as RX or prescription products. There are specific products which can be dispensed even in the absence of prescription from a doctor. We call these products as non-RX or OTC over the counter products. Over the counter products are typically not harmful. You can just buy them off the counter. They don't have any major side effects. Now for any product with the patient or the consumers added to the cart for check out, but which is a prescription required. Then, the pharmacist falls back to the patient and says that you have placed an order for which you know the prescription that you've uploaded is no longer valid. You will have to undergo another consultation with a qualified Doctor. most patients do understand this, once you explain to them the context well and every e-pharmacy has got on board a set of doctors who offer tele consultation. Also, there are governing bodies who audit these things.

There are many players who have gained a significant share in the market like Pharmeasy MetLife, then there are other companies, but the entry of Amazon into online pharmacies in India, how would this impact the overall industry and these companies as a whole?

The entry of Amazon is a very professional player who knows ecommerce, possibly the only company that knows ecommerce the best in the world. Now, how did Amazon become what it became? I think they stuck to some ground principles very well and they so they do few things, but they do those few things really well. I think that's the mantra what they follow. Number one is the quality, starting from the quality of packaging, the way they present the product online, and the delivery of exact products. For the product that you see online, I think sticking to that promise is key to succeed in any form of business. What you see and what you get should not be different from each other at any given point in time. Second, they are possibly the company that have the best consumer insight data, so they are very open for the consumer to put a photograph of an actual product and put it in a review column and have the world to see it. Very, very important. to gain trust. Just compare the packaging of Flipkart. When you have a Flipkart product delivered home, compare it with Amazon. How it is delivered, I don't have to say what it is. I'm sure all of us have experienced it. I think these are important things that matter in e-health also, so first be very clear on what your promise needs to be, do it exceedingly better, be the best. I think that's the mantra to go with. And there, are many of e-pharmacies players such as 1MG, pharmeasy, MetLife, are any of these people already there? My answer is not yet. The only player who could reach that level of businesses about 24/7 is Amazon They do it very well. They're very clear, very nicely presented, they deliver on time with cash back, points, loyalty programs already put in place and then



Amazon could really begin is standardization of quality both at a product level and at a service delivery level, which is good for the industry. So, what that will do is it will create a level of benchmarking on quality of service and quality of territory, where only the ones that can match would remain in business and anyone who can't match would actually go out of business.



TECHSCI RESEARCH
from NOW to NEXT

The top three companies operating in E pharmacies?

The stickiness factor is about quality though one is quality presentation, timely delivery, right, very clear on what the consumer wants that is what makes the people to come back to the same platform and body. So, if you ask me in the current context, you know the ones that have the highest share are basically Apollo, Tata 1mg, and Pharmeasy and these are the top three. But again, the other tata 1MG and pharomeasy are primarily because of their traditional presence. But I see that there is quite a bit of decline there though Tata has taken over the operations of 1MG I think is still quite a bit of things to be done and pharomeasy also are finding it difficult in terms of their inventory management per se. So that is where I think Apollo has a unique positioning because they have 5000 pharmacies across the country, and they can source from any of these 5000 pharmacies which is what makes. That e pharmacy arm and asset like model and it increases in and it's significantly increasing the top line gain of their offline magazine, you know it's already 5000 in number, therefore I think Apollo has been able to improve the leverage what we call the Omni channel model for the e-pharmacy.

As you know, post COVID, the E pharmacy industry has boomed. So, was there any challenge before?

Yeah, Pre- COVID. challenge faced was majorly forecasting inventory probably by geography, by region, by documents and others and secondly, pre COVID there was no telemedicine guidelines. So, e-pharmacies who had teleconsultations were kind of in a grey area where there was no clearly defined do's and don'ts of how many consultation in the e-pharmacy format. The third thing that was lack of omni-channel operating model.





Are there any development or any change you see in coming future?

Well, the industry is already undergoing the consolidation that is going to continue which is good for the industry. So therefore, you will see that only players which have very clearly defined value proposition and availability will thrive. Also, the quality and the presentation of the delivery should be good. So, I think these three would continue to determine, you know the success of e-pharmacies, but yes, going forward some of the models that have been experimented are firstly, there are already calling with the idea of having drones to deliver medicines. Will it be a reality? time will tell. But work has started in that direction. Secondly, most of the medicines, if you see the kind of medicines that are being delivered today by pharmacies, most of them are chronic medicines, 70 to 80% of the same, today's diabetes medicine, blood pressure medicine, cholesterol medicine, But if you see the mix of acute medicines, what I mean by acute medicine is lifesaving medicines is still very small because people don't believe that if someone is dying and they really need an injection. We delivered in the next 10 minutes, 15 minutes, 20 minutes flat. Is it even possible? People don't believe it is possible, but it is possible. So therefore, I think someone who comes up with the business model and operating model focusing on emergency delivery of life saving medicines is going to be very helpful. Think of it now organ transplant is a big thing, but transporting organs, especially liver, heart, and kidney has always been a challenging thing. So, can E health companies redefine the way how organs are transplanted from the donor side to the recipient side? Blood transfusion? Availability of the matched donor blood. Again, as a challenge, people go hopping from one blood bank to the other to find the right match of blood. So, can E pharmacies be a one stop shop for finding the right blood that you need at time of emergency?

Think of an ambulance instead of calling 100 different ambulance companies at times of need. If the insurance company can be a tech integrator of sorts where the nearest ambulance can be plotted. And again, very important that not all ambulances are the same. Depending on the nature of emergency, there are specific ambulances that have the specific kind of tech and specific kind of trained paramedic staff that picked up and save lives, right? So therefore, being able to match skill set, training, availability of tech infrastructure on board ambulance and getting that ambulance to reach the right place at the right time is also a very, very critical. Last but not the least, you know we have a wealth of data or information on patient identity lying in the form of Aadhaar, so everyone has an Aadhaar number as a part of validating the other, we have actually given our biometrics. Right now, every patient who goes into the healthcare system has something called a UHID, which is the unique health ID. Now if we can make sure that all of our health data, health information, medical history is all uploaded online, and it is linked to our unique health ID, all one needs to do if someone has kind of collapsed by the side of the road, all you need is the fingerprint of that person to identify who that person is, what has been his medical history, has he or she been on medical, some kind of medication, etcetera. So then by



TECHSCI RESEARCH
from NOW to NEXT



the time the patient reaches the hospital, they exactly know who that person is and what needs to be done. I think linking medical records to the UH ID, maintaining that they medical records on the cloud and you know attaching that to the biometrics and AADHAAR will do a lot of good in being able to deliver the right quality of health to the right person at the right time, all of this can be done through any technology like platform and that should be the vision of any health company.

As there is a new law which is not passed, called the existing drugs and cosmetic act of 1940. The new law would be focusing on medical devices and hospital equipments and different pharmaceutical drugs. Although the law has not been passed right now, it would be coming on 30th November, but how do you see the law in relation to online pharmacies in India, will it be making the online pharmacy systems stricter or what would be the thing that would happen like the change that you can foresee because of the change in the law?

As there is a new law which is not passed, called the existing drugs and cosmetic act of 1940. The new law would be focusing on medical devices and hospital equipments and different pharmaceutical drugs. Although the law has not been passed right now, it would be coming on 30th November, but how do you see the law in relation to online pharmacies in India, will it be making the online pharmacy systems stricter or what would be the thing that would happen like the change that you can foresee because of the change in the law?