

# Tech upgrades to boost healthcare delivery



ARJIT CHAKRABORTI

**T**HE Directorate General of Health Services (DGHS) under the health and family welfare ministry has reformulated its management information system (MIS) to include components of e-health and medical biotechnology (MBT). The DGHS is also developing a population health registry through geographical reconnaissance (GR).

A quick look at the DGHS website provides a number of links to access a variety of information regarding e-health and MBT. A user can access information for each district and even for each hospital under the governance of the DGHS. A few more projects are in progress to create a robust network of systems for healthcare delivery. Bangladesh's progress in the successful adoption of IT in its healthcare services industry has also been recognised by the World Health Organisation (WHO) in its report titled Bangladesh Health System Review.

The alignment of programme outputs with key healthcare issues continues to be important. It is also important to see how modern technologies can improve the effectiveness of these health service programmes.

The WHO conducted a situational analysis of production, supply and dispensation of medicines in Bangladesh in 2014-15 and published a report covering the same. The report indicates that several healthcare facilities suffer due to the unavailability of medicines. Some of these health service delivery facilities reported a 50 percent unavailability of medicines. To solve this problem, a robust inventory management system connecting all such facilities should be developed. This system should be able to provide timely information on stock in each healthcare delivery centre. In addition, the system must be capable of providing a realistic fulfilment plan for each of these medicines. Subsequently, these fulfilment plans can be published so that a registered manufacturer can consider these as production inputs and plan for the production of its medicines accordingly.

Technological advancements should be applied so that information is easily available to participants in the health system and everybody receives the intended benefits, including patients.

Another area of improvement is the effectiveness of prescriptions. The effectiveness of a prescription improves significantly when the prescribed medicines are in stock and consistency is maintained in prescribing medicines for common types of diseases. A medical practitioner who uses the right kind of clinic management system can take online assistance to understand the availability of medicines in a store and prescribe them accordingly.

The practitioner can also get online support based on her/his observation of the patient and subsequent documentation. Such technological assistance usually

improves the effectiveness of each prescription significantly. The online preparation and storage of prescriptions will also bring two more benefits: (a) earlier prescriptions of the same patient will be available for quick reference, and (b) advanced technologies will be able to assist in reviewing and analyzing the prescriptions in an electronic format.

This will result in the creation of electronic health records (EHRs). Some hospitals in Bangladesh already have basic systems for EHRs. They can focus on further digitisation of records, and use of analytics to gain insights from data. They can also start thinking of adopting other advanced technologies for patient care and operations management.

The healthcare service industry in developed nations has already adopted EHRs in some form. About 90% of hospitals in the USA have begun using EHRs, according to a report published by PwC. Moreover, healthcare providers in developed countries have now started adopting emerging technologies such as artificial intelligence, robots, virtual reality and 3D printing. In fact, the application of 3D printing started several years ago in the field of dentistry, where companies developed specialised orthodontic systems. In the coming years, we expect to see some of these advanced technologies being used in Bangladesh as well.

The field of surgical procedures is slowly evolving through the adoption of robotic procedures and augmented reality based interventions. The use of robotic surgical procedures enhances the speed and accuracy of medical procedures, thereby improved quality of patient services.



Many organisations in developed as well as emerging countries are exploring the possibility of deploying drones to supply healthcare goods quickly in case of emergencies. The use of drones to transport medicines will be highly effective in disaster-hit areas—for example, areas affected by floods. Many organisations are also exploring the possibility of sharing critical, life-saving healthcare resources, such as rare blood groups, by deploying an effective drone-powered transportation system.

While each technology brings unique advantages to patient care and improves the overall state of the healthcare industry, its impact is not going to be uniform across countries. Hence, it is imperative that the technologies chosen for healthcare services in Bangladesh are closely aligned with the intended benefits for patients and other stakeholders.

For some organisations in Bangladesh, improving their medicine inventory management will lead to significant benefits for their present state of services. For others, building a robust EHR management system will deliver the best set of benefits. For healthcare research organisations

in Bangladesh, a robust data and analytics platform built on a robust suite of enterprise applications may be useful to accelerate research findings and breakthrough discovery.

Additionally, the successful adoption of medical sensors, Internet of things (IoT) devices and mobility solutions will lead to impactful progress in the healthcare service delivery industry.

All of the technologies discussed above will require the workforce of the healthcare industry to acquire new skills. There will also be a need to hire new talent, or to collaborate with enterprises capable of assisting with the development of these technologies. Healthcare organisations should plan to identify and collaborate with technology organisations that will be able to assist them by complementing the delivery of services.

With all the above-mentioned technologies gradually becoming part of the healthcare services industry, the industry is set to undergo a major transformation in the next few years.

The writer is a partner at PwC. The views expressed here are personal.

## China beefs up cyber defences with centralised threat database

REUTERS, Beijing

China said on Wednesday it will create a national data repository for information on cyber attacks and require telecom firms, internet companies and domain name providers to report threats to it.

The Ministry of Industry and Information Technology (MIIT) said companies and telcos as well as government bodies must share information on incidents including Trojan malware, hardware vulnerabilities, and content linked to "malicious" IP addresses to the new platform.

An MIIT policy note also said that the ministry, which is creating the platform, will be liable for disposing of threats under the new rules, which will take effect on Jan. 1.

Companies and network providers that fail to follow the rules will be subject to "warnings, fines and other administrative penalties", it said, without giving any details.

The law is the latest in a series of moves by Chinese authorities designed to guard core infrastructure and private enterprises against large-scale cyber attacks.

In June, China's cyber watchdog formalised a nationwide cyber emergency response plan, which included the construction of a central response system and mandated punitive measures for government units that failed to safeguard the system.

## S Korea's Hyundai Motor says India tax reforms a setback

AFP, New Delhi

South Korean auto giant Hyundai Motor says that fresh changes to India's new national tax had shaken industry confidence in the country with firms already struggling to boost sales.

The Indian government launched a new national goods and services tax in July to replace more than a dozen separate levies and transform the \$2 trillion economy into a single market for the first time.

The goods and services tax (GST) sets out four different rates of between five and 28 per cent for businesses instead of the one originally envisioned.

However, the government has made several changes to the tax regime regarding some products including sports vehicles, and luxury and hybrid cars, which auto makers complain have forced them to alter their pricing strategies.

"The recent rolling back to multiple rates with pre-GST classification has come as a setback to the industry, shaking the confidence of auto manufacturers," Hyundai said in a statement.

"We expect the coming festive season (Diwali) will witness low customer sentiment on new purchase decision. Further, in the absence of consistent and long-term policy the investment for new products and new technology will be adversely impacted," it added.

# French labour reforms: why workers are protesting



Young protesters back off to avoid tear gas canisters during clashes with anti-riot police within a protest called by several French unions against the labour law reform in Nantes, western France on Tuesday.

AFP, Paris

**F**RENCH President Emmanuel Macron's plan to overhaul the country's complex labour code, fulfilling a central campaign promise, sparked the first strikes and protests Tuesday.

While the 39-year-old centrist believes that making the labour market more flexible will help drive down unemployment of 9.5 percent, opponents fear an erosion of worker protections.

What he hopes will be a signature reform entails a major overhaul of the more than 3,000-page labour code which sets out workers' rights, with some measures dating back over a century.

Macron, whose Republic on the Move party enjoys a comfortable majority in parliament, intends to fast-track the reforms by executive orders which are expected to be ratified by parliament in the next few months.

The reforms will give small companies in particular more freedom to negotiate working conditions with their employees, rather than being bound by industry-wide collective

agreements negotiated by trade unions.

A cap has also been set on the amount of compensation awarded by industrial courts in cases of unfair dismissal -- a key demand of bosses who complain that lengthy and costly court cases discourage them from hiring.

Other measures include streamlining workers' committees, which are mandatory within large companies, and expanding the use of flexible "project contracts" which allow companies to hire people for a specific job.

In a further concession to companies, multinationals whose French operations are struggling will find it easier to lay off staff, while workers made redundant will receive higher payouts. Several unions also fear new measures that would give employers greater leeway to launch voluntary redundancy plans.

Philippe Martinez, the head of the Communist-backed CGT union leading Tuesday's protests, said the reforms give "full powers to employers" and has called for strikes and rallies.

Another day of demonstrations has been organised by the CGT on September 21.

But the leaders of more moderate

unions, including the CFDT -- the biggest private-sector union -- and the hard-left Force Ouvriere have adopted a wait-and-see approach.

"We need to stop thinking that trade union action only makes sense when we demonstrate," the head of the CFDT, Laurent Berger, told Franceinfo radio on Tuesday, explaining how he favoured dialogue.

In parliament, the opposition to the changes is being led by the radical France Unbowed party of leftist firebrand Jean-Luc Melenchon, which is planning a mass march in Paris on September 23.

The right and centre-left parties in parliament have broadly backed the reforms.

"Interest rates are still very high," said A. Issac George, chief financial officer of GVK Power & Infrastructure Ltd. He said his firm's borrowing costs have remained unchanged at about 11 percent.

That makes it tougher for the conglomerate to lower its net debt of around 179 billion rupees (\$2.80 billion). GVK's earnings covered just half of its debt servicing costs, Credit Suisse data shows, below the 1 percent threshold typically seen as a

# As India Inc struggles to cut down debt, the economy suffers

REUTERS, Mumbai

**I**NDIA'S cash crunch and confusion over the introduction of a national sales tax were initially blamed for pulling economic growth down to its weakest pace in more than three years. But that is masking a more debilitating factor affecting the economy - corporate debt.

Thomson Reuters data, based on the latest annual earnings reports, shows India's corporate debt rose to a seven-year high at the end of March. More than a fifth of large companies did not earn enough to pay interest on their loans and the pace of new loans fell to the lowest in more than six decades.

The Indian government reported on Aug 31 that annual GDP growth in the quarter ended June dropped to 5.7 percent, an envious pace for many countries but India's weakest since early 2014.

It was blamed on attempts by the government to flush out money hidden from the tax man, which caused a cash crunch, and the introduction of a general sales tax (GST), which prompted businesses and consumers to hit the pause button.

But Indian business executives say they are more concerned about the impact of soured loans on bank balance sheets, which prevent them from getting the full benefit of central bank rate cuts. That is sapping India's economic vitality, they say.

Since January 2015, the central bank has cut policy rates by 200 basis points, or 2 percentage points, but commercial bank benchmark lending rates have come down less, by about 120 basis points.

"Interest rates are still very high," said A. Issac George, chief financial officer of GVK Power & Infrastructure Ltd. He said his firm's borrowing costs have remained unchanged at about 11 percent.

That makes it tougher for the conglomerate to lower its net debt of around 179 billion rupees (\$2.80 billion).

GVK's earnings covered just half of its debt servicing costs, Credit Suisse data shows, below the 1 percent threshold typically seen as a



A cloth merchant holds message papers to distribute as he attends a procession during a strike to protest the implementation of the goods and services tax on textiles in Kolkata, India.

REUTERS/FILE

bare minimum. "We are not in a position to take a decision on whether we should expand our business or set up new businesses," said George. GVK is not alone in trying to manage high debts.

Thomson Reuters data shows net debt for 288 companies with a market capitalisation of more than \$500 million, covering most big firms in India, has hit at least a seven-year high of 18 trillion rupees (\$281 billion). Soured debt was 12 percent of total loans held by lenders at the end of March.

Another Thomson Reuters analysis showed more than a fifth of 513 Indian companies had interest cover of less than 1 percent. New loans are also hard to come by: RBI data shows bank credit growth fell by a quarterly record in April-June. On an annual basis, the pace of new loans in the year to the end of March, fell to the lowest since the fiscal year ended in March 1954.

The impact can be seen in the GDP data. Gross capital formation, a gauge of private investment, fell to less than 30 percent of GDP in the June quarter, from 31 percent a year earlier and 38 percent a decade ago.

The Reserve Bank of India (RBI), the central bank, has been reluctant to cut rates too aggressively because of con-

cerns about consumer inflation.

"It is only after lending rates come down that demand will revive to exhaust capacity and spark off investment," Bank of America Merrill Lynch said in a note to clients.

RBI officials though see the issue as a banking one, and want the government to inject more funds into state-run lenders. Indian banks needed "substantial additional capital" from the government, RBI Deputy Governor Viral Acharya said.

Fitch Ratings said on Tuesday that Indian banks were likely to need about \$65 billion in additional capital, 95 percent of it for state-run lenders, by March 2019, far above the \$11 billion budgeted by the government.

The government says it stands behind the banks, but has yet to commit additional capital. It is pushing instead for measures to grant the RBI more power to steer companies through bankruptcy, a process analysts say could take years.

The government has other options: former RBI Governor Raghuram Rajan, for example, proposed in a Reuters interview that New Delhi sell stakes in state-owned companies to fund a bank recapitalisation.