India’s healthcare spending

Net of specialist care must be spread throughout country (The Tribune: 20220914)


AFTER a steady rise spanning 14 years since 2004-05, government expenditure on health as a percentage of the GDP saw a sudden fall in 2018-19, the latest financial year for which figures are available. - File photo

AFTER a steady rise spanning 14 years since 2004-05, government expenditure on health as a percentage of the GDP saw a sudden fall in 2018-19, the latest financial year for which figures are available. According to the National Health Accounts data released on Monday, public health expenditure for 2018-19 was 1.28 per cent of the GDP, down from 1.35 per cent in the previous financial year. After that, government spending on public health has seen a significant rise since the Covid pandemic struck two-and-a-half years ago, but it could be argued that a health emergency forced the hand of the decision-makers. The fact is that the numbers from the Union Ministry of Health show that in the pre-pandemic times, India was not on track to take health spending to 2.5 per cent of the GDP by 2025, as envisaged in the National Health Policy in 2017 — far from it, actually. It is evident that spending on healthcare is lagging far behind the country’s economic growth, as reflected in the GDP.

The positive aspect of the new data is that out-of-pocket expenditure by Indian citizens on healthcare is continuing to decline, falling from nearly 70 per cent of the total national expenditure in 2004-05 to 48 per cent in 2018-19; this was possible because the government health expenditure rose from 22.5 per cent to 40.6 per cent in this period. However, the country’s per capita healthcare expenditure has seen only a marginal rise over the last few years: from Rs 3,174 in 2013-14 to Rs 3,314 in 2018-19. At constant prices, this does not amount to much.

The numbers for the last two financial years, when released, would reflect the urgency the government was forced to show in order to deal with the devastating effects of the pandemic. However, with increased spending, it is incumbent on the Central and state governments to
ensure that public funds are spent wisely. The focus must be on providing top-class specialist healthcare to people in towns and villages — and not on creating behemoth hospitals in the cities, which then become clogged with patients travelling from far and wide for treatment. Good public healthcare is the right of every citizen and the government must do its utmost to ensure that it is provided to them closest to where they live — village, town or city.

Active covid cases in country decline to 45,749
5,108 new cases, 7 more deaths reported (The Tribune: 20220914)


India logged 5,108 new coronavirus infections taking the total tally of covid-19 cases to 4,45,10,057, while the active cases dipped to 45,749, according to the Union Health Ministry data updated on Wednesday.

The death toll climbed to 5,28,216 with 19 fatalities, which includes 12 deaths reconciled by Kerala, the data updated at 8am stated.

The active cases comprised 0.1 per cent of the total infections, while the national recovery rate increased to 98.71 per cent, the ministry said.

The daily positivity rate stood at 1.44 per cent while the weekly positivity rate was recorded at 1.7 per cent.

A total of 89.02 crore covid tests have been conducted so far; 3,55,231 tests were conducted in the last 24 hours.

As many as 215.67 crore total vaccine doses, including 94.57 crore second doses and 18.7 crore precaution doses have been administered so far under the nationwide vaccination drive. A total of 19,25,881 doses were administered in the last 24 hours, the ministry said.

New covid variant
Another new covid variant is spreading. Here's what we know about Omicron (The Tribune: 20220914)


Another new covid variant is spreading. Here's what we know about Omicron
BA.4.6, a subvariant of the omicron Covid variant which has been quickly gaining traction in the US, is now confirmed to be spreading in the UK.

The latest briefing document on Covid variants from the UK Health Security Agency (UKHSA) noted that during the week beginning August 14, BA.4.6 accounted for 3.3 per cent of samples in the UK.

It has since grown to make up around 9 per cent of sequenced cases

Similarly, according to the Centres for Disease Control and Prevention, BA.4.6 now accounts for more than 9 per cent of recent cases across the US. The variant has also been identified in several other countries around the world

So what do we know about BA.4.6, and should we be worried? Let's take a look at the information we have so far.

BA.4.6 is a descendant of the BA.4 variant of omicron. BA.4 was first detected in January 2022 in South Africa and has since spread around the world alongside the BA.5 variant.

It is not entirely clear how BA.4.6 has emerged, but it's possible it could be a recombinant variant. Recombination happens when two different variants of SARS-CoV-2 (the virus that causes Covid-19) infect the same person, at the same time.

While BA.4.6 will be similar to BA.4 in many ways, it carries a mutation to the spike protein, a protein on the surface of the virus which allows it to enter our cells.

This mutation, R346T, has been seen in other variants and is associated with immune evasion, meaning it helps the virus to escape antibodies acquired from vaccination and prior infection.

Severity, infectiousness and immune evasion

Fortunately, omicron infections generally cause less serious illness, and we've seen fewer deaths with omicron than with earlier variants. We would expect this to apply to BA.4.6 too. Indeed, there have been no reports yet that this variant is causing more severe symptoms.

But we also know that omicron subvariants tend to be more transmissible than previous variants.

BA.4.6 appears to be even better at evading the immune system than BA.5, the currently dominant variant. Although this information is based on a preprint (a study that is yet to be peer-reviewed), other emerging data supports this.

According to the UKHSA's briefing, early estimates suggest BA.4.6 has a 6.55 per cent relative fitness advantage over BA.5 in England.

This indicates that BA.4.6 replicates more quickly in the early stages of infection and has a higher growth rate than BA.5.

The relative fitness advantage of BA.4.6 is considerably smaller than that of BA.5 over BA.2, which was 45 per cent to 55 per cent.
The University of Oxford has reported that people who had received three doses of Pfizer's original Covid vaccine produce fewer antibodies in response to BA.4.6 than to BA.4 or BA.5. This is worrying because it suggests that Covid vaccines might be less effective against BA.4.6.

The capacity of BA.4.6 to evade immunity may however be addressed to a degree by the new bivalent boosters, which target omicron specifically, alongside the original strain of SARS-CoV-2. Time will tell.

Meanwhile, one preprint study shows that BA.4.6 evades protection from Evusheld, an antibody therapy designed to protect people who are immuno-compromised and don't respond as well to Covid vaccines.

Vaccination is key

The emergence of BA.4.6 and other new variants is concerning. It shows the virus is still very much with us, and is mutating to find new ways to overcome our immune response from vaccination and previous infections.

We know people who have had Covid previously can contract the virus again, and this has been particularly true of omicron. In some cases, subsequent episodes can be worse.

But vaccination continues to offer good protection against severe disease, and is still the best weapon we have to fight Covid. The recent approval of bivalent boosters is good news. Beyond this, developing multivalent coronavirus vaccines that target multiple variants could provide even more durable protection.

A recent study showed that a multivalent coronavirus vaccine administered through the nose elicited a strong immune response against the original strain of SARS-CoV-2, as well as two variants of concern, in mouse models.

Close monitoring of new variants, including BA.4.6 is pressing, as they could lead to the next wave of Covid pandemic.

For the public, it will pay to stay cautious, and comply with any public health measures in place to prevent the spread of what remains a very contagious virus.

Robotic Surgery

Bengaluru surgeon among top 3 winners in International Robotic Surgery
(The Tribune: 20220914)


Foundation’s charter is to encourage excellence in robotic surgery by facilitating specialist surgeons to be trained to become accomplished robotic surgeons

Bengaluru surgeon among top 3 winners in International Robotic Surgery
Bengaluru-based Dr Sandeep Nayak was among the three surgeons from the US, India and Spain who won top honours in the ‘KS International Robotic Surgery Innovation competition’ by Michigan-based Robotic Surgery evangelist Vattikuti Foundation.

The three winners were chosen from 100 global entries from the specialities of Urology, Gynaecology, General Surgery, Hepato-biliary-pancreatic surgery, Colorectal, Head & Neck, Paediatric, Cardiothoracic, and joint replacement surgeries.

For ‘Robotic Infraclavicular Approach for Minimally Invasive Neck Dissection’ the second award went to Dr Nayak, Director, Surgical Oncology, Fortis Cancer Institute here.

“Dr. Nayak innovated a robotic technique to perform very major cancer surgery of the head and neck to clear the lymph nodes in the neck with quick patient recovery and minimal discomfort,” a Foundation statement said on Tuesday.

The winning entry of Dr Jihad Kaouk, Department of Urology, Cleveland Clinic, Cleveland, Ohio, USA’s entry ‘Single Port Robot-Assisted Kidney Transplantation Extraperitoneal Approach’ was judged worthy of first award.

The third award went to a team of Dr Alberto Piana, Dr Paolo Verri, and Dr Alberto Breda of Oncology Urology and Kidney Transplant Surgery, Fundacio´ Puigvert, Barcelona, Spain for their entry of ‘3-D Augmented Reality Guided Robotic Assisted Kidney Transplantation’.

“As surgeons continue to innovate newer procedures in robotic surgery, the Vattikuti Foundation will continue to invest and make it accessible to other surgeons,” said the President of Vattikuti Foundation, Raj Vattikuti.

The Foundation’s charter is to encourage excellence in robotic surgery by facilitating specialist surgeons to be trained to become accomplished robotic surgeons, it was stated.

**Medicine**

**India drops popular Zantac from essential medicine list over cancer concerns (The Tribune: 20220914)**


Ranitidine is among 26 medicines dropped from the NLEM 2015 version

India drops popular Zantac from essential medicine list over cancer concerns

Photo for representation only.

India on Tuesday dropped antacid Ranitidine, popularly sold as Zantac, from the National List of Essential Medicines 2022 over cancer concerns.
Ranitidine is among 26 medicines dropped from the NLEM 2015 version.

Zantac and other ranitidine products contaminated with high levels of NDMA, a probable human carcinogen, could cause many types of cancer, including bladder cancer, colon cancer and prostate cancer.

In 2019, N-nitrosodimethylamine (NDMA) was identified in samples of ranitidine which led the US FDA to alert the public of the potential risks associated with NDMA exposure, which include cancer.

Heartburn drug Ranitidine has been extensively used in India.

It is a gastrointestinal drug.

The latest version of NLEM drops all forms of Ranitidine: 150 mg tablet, oral liquid and injection.

Vice chairman of the committee that finalised NLEM 2022 YK Gupta said deletion involves medicines banned by the regulator due to side effects and safety concerns which change the drug’s risk benefit balance.

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**Cancer drugs, patented anti-virals, anti-diabetic and de-addiction drugs**

**More cancer drugs, patented anti-virals, anti-diabetic and de-addiction drugs to get cheaper** *(The Tribune: 20220914)*


National List of Essential Medicines, 2022, published, includes 384 medicines of which 34 are new and include four key anti-cancer treatments.

More cancer drugs, patented anti-virals, anti-diabetic and de-addiction drugs to get cheaper

Four key anti-cancer drugs and four patented antivirals used in the treatment of tuberculosis, HIV and hepatitis C are set to get cheaper with their inclusion in the latest edition of National List of Essential Medicines, 2022, published on Tuesday.

The list features 384 medicines as against 376 in NLEM, 2015. It adds 34 medicines and deletes 26 from the previous list.

The 34 new medicines in NLEM, 2022, feature four anti-cancer drugs so far in the non-scheduled drug category and hence are expensive. These include injections and tablets used in the treatment of cancers of white blood cells, pancreas, prostate and bone marrow. With these additions today, NLEM, 2022, has 63 anti-cancer medicines which are now under price control and affordable.
For the first time, NLEM, 2022, has also included four patented drugs which will get cheaper in the coming days once the National Pharmaceutical Pricing Authority fixes a ceiling price for all 384 essential medicines. NLEM drugs cannot be sold above NPPA's ceiling prices. All other drugs are allowed a maximum yearly price increase of 10 per cent.

The patented antivirals in NLEM, 2022 are anti-TB drugs Bedaquiline and Delamanid, and anti-HIV Dolutegravir and anti-hepatitis C Daclatasvir.

The new drugs under NLEM also include anti-diabetic insulin Glargine injection, de-addiction formulations Buprenorphine tablet and nicotine replacement therapy; cardiovascular drugs tablet Dabigatran and injection Tenecteplase and indigenous Rotavirus vaccine.

YK Gupta who headed the standing committee on essential medicines that formulated NLEM, 2022 said no covid-19 drug had yet been included in the list as all these drugs had emergency use approval and more data are required to grant them regular approvals.

"We have kept the pandemic proportions of antimicrobial resistance in mind while formulating NLEM, 2022, which included drugs that can treat 80 per cent of India's current diseases. The list has a whole range of effective antibiotics," Gupta said.

NLEM can feature only those medicines that are approved and licensed in India by the drug regulator and not drugs that may be approved abroad but not in India.

Also, any medicine to enter NLEM must have public health value to India, proven efficacy and safety and cost-effectiveness.

The 384 NLEM 2022 medicines have been categorised in 27 therapeutic categories. Of the 34 new drugs the list features 18 in the anti-infective segment; four in anti-cancer; two in cardio; one in immunological (Rotavirus vaccine); one in eye segment; three in drug de-addiction category and one in the respiratory tract segment.

The first NLEM was published in 1996 and had 279 medicines. NLEM is revised every three years. The latest list was delayed due to covid. The last came in 2015.

Health spending in India

Explaining the declining household burden of health spending in India (Hindustan Times: 20220914)

https://epaper.hindustantimes.com/Home/ShareArticle?OrgId=149ace695b7&imageview=0

The latest report of National Health Accounts (NHA) – it has data for 2018-19 – shows that the burden of health spending on Indian households continues to decrease. The share of Out of Pocket (OOP) health spending in total health spending stood at 48.2% in 2018-19, more than 10 percentage points lower than the 58.7% value for 2016-17. This number was 64.2% for 2013-14. What has led to this sharp reduction in share of OOP health spending? An HT analysis suggests that while rising government spending has played a role, there could be statistical factors at play as well. Here are five charts which explain this argument in detail.
1 The 2017-18 OOP spending share puzzle is key to understanding this

We have systematic and continuous NHA numbers from 2013-14. They show that the share of OOP health spending has been declining every year. The falling trend notwithstanding, 2017-18 seems like an abnormal year in the OOP share pattern, given the sharp fall in this number.

What explains such a large fall in just one year? This question becomes even more pertinent given the fact that World Bank data on share of OOP spending also shows a similar sharp decline although World Bank estimates of OOP spending are higher than in the NHA.

<table>
<thead>
<tr>
<th>Share in total health spending (in %)</th>
<th>Share of OOP spending in total health spending (in %)</th>
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<tbody>
<tr>
<td>Union government</td>
<td>64.2</td>
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<tr>
<td>State government</td>
<td>48.2</td>
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<tr>
<td>Private health insurance</td>
<td>26.7</td>
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<tr>
<td>2013-14</td>
<td>18.9</td>
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<tr>
<td>2014-15</td>
<td>9.7</td>
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<td>2015-16</td>
<td>3.4</td>
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<td>2016-17</td>
<td>6.6</td>
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<tr>
<td>2017-18</td>
<td>48.2</td>
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Source: NHA reports | Source: World Bank; NHA

2 A new NSO survey on health consumption could be the reason

It is possible that the sharp fall in OOP share in 2017-18 is more methodology-driven than a reflection of the actual situation on the ground. NHA estimates OOP spending from National Statistical Office’s (NSO) health consumption survey, which has been conducted only twice since 2014. NHA reports till 2016-17 rely on the 2014 NSO survey, while NHA reports from 2017-18 onwards – the year which shows a very large fall in OOP share – uses the 2017-18 NSO survey. It is likely that the World Bank data also uses the NSO numbers for its calculations.

While a comparison of the exact estimation methodology which is used to extrapolate NSO data into NHA data on OOP spending is beyond the scope of this article, a preliminary comparison does suggest that the NHA report tends to overestimate the decline in health spending. This can be seen from the fact that the decline in per capita OOP spending in the NHA is greater than the decline in per admission spending seen in the NSO report. Logically speaking, the explanation for such a decline can be an assumption that people are falling ill less often.

<table>
<thead>
<tr>
<th>Change in OOPE at constant prices (in %)</th>
<th>OOP per admission (not as in-patient): 2014 to 2017-18</th>
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<tr>
<td>-13.8</td>
<td>OOPE per hospitalisation (including childbirth): 2014 to 2017-18</td>
</tr>
<tr>
<td>-14.6</td>
<td>OOPE per hospitalisation (excluding childbirth): 2014 to 2017-18</td>
</tr>
<tr>
<td>-19.6</td>
<td>OOP per capita from NHA (2014-15 to 2017-18)</td>
</tr>
<tr>
<td>-20.2</td>
<td>OOP per capita from NHA (2013-14 to 2017-18)</td>
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Source: NHA; Unit-level NSO

3 These debates must not undermine importance of the rise in government spending on health

While the debate over exact decline in OOP spending is an academic question which can only be resolved with better and more frequent data collection, this should not undermine the contribution of higher government spending on reducing the burden of health spending on households. As can be seen in Chart 1, it is higher government spending and not private health insurance which has plugged the gap for falling OOP spending on health between 2013-14 and 2018-19. This is exactly why the marginal fall in health spending as a share of GDP in 2018-19 should be a matter of concern. What is also worth keeping in mind is the fact that the health spending burden could have increased significantly after the pandemic.

<table>
<thead>
<tr>
<th>Union and state government health spending (as % of GDP)</th>
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<tbody>
<tr>
<td>Union government</td>
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<tr>
<td>0.39</td>
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<td>0.41</td>
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<td>0.71</td>
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<td>0.84</td>
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<td>0.80</td>
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<td>0.85</td>
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Source: World Bank; NHA; Unit-level NSO
THE GENE CATCH

They kept him under surveillance and collected his DNA sample from a soda straw he used in a restaurant. The accused, James David Rogers, was sentenced to 6 months in federal prison.

CANNON THE INDIAN AGENCIES

In India, where law enforcement agencies are frequently confronted with dual cases in criminal investigations, a lack of much-needed scientific evidence frequently results in shoddy investigations or cases being placed in cold storage.

“We have the same technology as the United States when it comes to forensic genomics. The investigations carried out by agencies such as the FBI can be carried out by the Indian police if we have national and regional DNA databases for cross-referencing,” says Dr. K. Thangaraj, Director of the Centre for DNA Fingerprinting and Diagnostics (CDFD). Not only can the science be used in criminal investigations, but it can also be used effectively in cross-border terrorism to determine the nationality of terrorists, says the scientist.

“It all depends on how the Indian law enforcement agencies look at it (using genetic genealogy for crime investigations and whether they are able to collect material from the crime scene properly and preserve it).” says Thangaraj known worldwide for his path-breaking work in the field of DNA. He is also the acronym for the Combined DNA Index System (CODIS), a generic term used to describe the FBI’s program for gathering and storing DNA databases as well as the software used to run the data bases.

A DNA Databank is a secure storage system for an individual’s unique identity for future use. To store an individual’s DNA, a small blood or saliva sample or hair is taken. This provides an individual’s identity based on his or her unique genetic makeup, which is useful in solving various crimes.

DNA found at a crime scene is compared to DNA samples taken from suspects by forensic experts. If no match is found, they may be able to rule out the suspect’s involvement, depending on how many samples are saved in the database. However, if there is a match, as in Ena LeBaron’s case, the police can proceed with the investigation quickly.

Nearly 70 countries, including the US, States, the UK, Australia, South Africa, and Malaysia, have massive DNA databanks that help investigators solve cases and bring the perpetrators of the most heinous crimes to justice. It has become the most valuable resource for those agencies to solve cold cases. India, on the other hand, does not yet have a DNA testing database. The Indian government, on the other hand, is known for its scientific genealogy in crime investigations. It will be a boon for us. But how elaborate the DNA databases will need to be for us to match samples needs clarity. For example, if we were to try to match the DNA of an unknown dead body (there are about 90,000 unidentified bodies found in country every year), how many samples will be available for consideration? wonders senior IPS officer Arvind Malhotra, who during his long stint in the Central Crime Bureau, Hyderabad, police, cracked several complex cases.

He says the same goes for an accused who is completely unknown. “I do see genetic genealogy as a tool that will guide us in our future investigations. But again, it depends on how many samples will be collected and preserved in the database.” explains Malhotra, presently posted as Joint Commissioner of Police (Administration), Cyberabad.

DNA BILL PENAL

The new DNA Technology Regulation Bill, which is currently being considered by the Centre, is in focus. The Ministry of Science and Technology informed the Rajya Sabha in April this year that the Bill aims to regulate the use and application of DNA technology with the goal of establishing the identity of certain categories of persons, including victims, offenders, suspects, unidentified missing persons, and unidentified deceased persons. One of the most important aspects of the Bill is the creation of a national DNA databank and regional DNA databanks for each state, or two or more states.

Every databank must maintain the following types of data:

1. crime scene index (CSI) index for current cases
2. murder cases index (MI) index for crimes committed within 10 years of each other
3. missing persons index (MPI) index for missing persons
4. unidentified deceased persons index

“In our country, we are divided into various crime groups, which makes it difficult to generalise the database with just five samples. We need a relatively much bigger database than that,” says Gyaneshwar Chaubey, Professor of Zoology (Molecular Anthropology) at Banaras Hindu University (BHU), who is well-known for his expertise on genetics, forensic biology, and DNA sequencing. “Training and awareness among them is another challenge to overcome the crime scene.” Beals Prof Chaubey, who was a Visiting Scientist to the Sanger Centre, UK, and is known for his in-depth work on several ethnic groups of South Asia.
Azithromycin arbitrarily

Why popping Azithromycin arbitrarily may make you drug-resistant
(Indian Express: 20220914)


Using these drugs for even trivial upper respiratory infections, which are mostly viral infections that do not require any antibiotic, is a threat to preserving the potential of available antibiotics. The indiscriminate use of broad-spectrum antibiotics is an important reason for the emergence of drug resistance. India needs a stringent system to regulate the medicine market, says Dr Shaffi Fazaludeen Koya, Research Fellow, Boston University School of Public Health USA, one of the authors of the Lancet study.

India is the largest producer and consumer of antibiotics in absolute volume although the per-capita consumption rate is still lower compared to Europe and America. (File Representational Photo)

Written by Dr Shaffi Fazaludeen Koya

India is the largest producer and consumer of antibiotics in absolute volume although the per-capita consumption rate is still lower compared to Europe and America. Yet India consumes a high volume of broad-spectrum (drugs which act against a number of bacterial types) antibiotics which should ideally be used sparingly. These and other findings from our recent study — using one of the largest available dataset on drug sales in India, PharmaTrac — published in Lancet Regional Health Southeast Asia, show the extent of inappropriate use of antibiotics in India.

We used a standard measure— defined daily doses (DDD)— which helped to uniformly quantify drug use irrespective of package size, strength of formulations and dose. We examined inappropriateness levels using a globally acceptable norm — WHO ‘Access-Watch-Reserve’ (AWaRe) grouping. ‘Watch’ antibiotics, as the name indicates, should be used watchfully, as these are mostly broad-spectrum antibiotics to be used in very specific indications. ‘Access’ antibiotics on the other hand should be prioritised whenever an antibiotic is indicated and globally the target is to have at least 60 per cent share of ‘Access’ molecules in total consumption.
Our study reported a total reversal of ‘Access-Watch’ ratio with ‘Watch’ antibiotics constituting 72.7 per cent of total DDDs used in 2019 in India. Azithromycin — a broad-spectrum ‘watch’ group antibiotic — was the most consumed antibiotic in 2019. (640 million DDDs, 12.6 per cent of total antibiotic doses). Using these drugs for even trivial upper respiratory infections, which are mostly viral infections that do not require any antibiotic, is a threat to preserving the potential of available antibiotics. The indiscriminate use of broad-spectrum antibiotics is an important reason for the emergence of drug resistance.

So what are the most commonly misused drugs? Quite a few

Azithromycin — Fever, throat pain, cough in adults and children

Amoxycillin — Common cold, fever, ear pain, throat pain, cough

Amoxycillin — Clavulanic acid combination – fever, throat pain and cough in adults

Ciprofloxacin, ofloxacinc — Urinary infection, diarrhoea

Cefixime — Fever, throat pain, cough

We examined the inappropriate use against the prevailing antibiotic market system and licensing and regulatory environment in India. India is among a handful of countries that use a large number of fixed dose combinations (FDCs). Antibiotic FDCs — except a very few that have proven scientific value — are problematic due to reduced efficiency and wrong dose-scheduling, resulting in either under-dosing or over-dosing leading to emergence of antibiotic resistance. Previous reports, including a parliamentary standing committee report and an Indian Council of Medical Research expert committee report, highlighted the growing number of “irrational” FDCs as a public health issue.

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In terms of regulation, India has a complicated system with one central regulator (Central Drugs Standard Control Organisation (CDSCO) and 28 state level regulators sharing powers and responsibilities. While all new molecules (drugs) need CDSCO approval, the marketing licences which are specific for products (brands/formulations) can be obtained from state regulators — and these state level agencies have limited human resource and technical capacity to decide on the merit of the formulations in the product. This leads to a large influx of
antibiotic FDCs into the market with varying strengths and combinations, which have not gone through systematic clinical trials or studies unlike the individual components of these FDCs.

These FDCs often contain medicines from different antibiotic classes, resulting in inappropriate combinations, fuelling the emergence of anti-microbial resistance. Our study showed that only 45 per cent antibiotic brands and 23 per cent of FDC doses had CDSCO approved formulations.

These findings call for careful policy scrutiny at the highest level of the government considering the serious threat of antibiotic resistance that the world and particularly India face today. As the Indian government is in the process of bringing in a new law to replace the Drugs and Cosmetics Act, 1940, we have a golden opportunity to clean up the drug regulatory environment in India. First, we need to have a single central regulator for drug approval and licensing like the US FDA. Or else the CDSCO should have legal and regulatory powers to overrule decisions of state regulators if state regulators approve inappropriate formulations/products. There should be a process to challenge the approval decisions by state regulators. Second, we need to empower state regulators with adequate funding and human resources to take scientific decisions when it comes to approval of drug products. Third, the new law should expand the list of Schedule H1 medicines to include at least all the ‘Watch’ and ‘Reserve’ antibiotics that require mandatory documented evidence of prescription by a qualified doctor before a pharmacist can dispense these medicines. Lastly, the government initiatives on digital health should be used to facilitate the secure transfer of prescription details between doctors and pharmacists. They should have regular audits of prescription and sales data to ensure that antibiotic prescriptions and sales follow certain standards based on local microbiological and drug sensitivity patterns. These policy measures are important even when we continue to invest in improving access to appropriate antibiotics through the Jan Aushadhi stores and an efficient procurement system.

**DASH diet**

**Why is DASH diet still most effective to reduce heart attack risk (Indian Express: 20220914)**


A new research in the US shows how following this regime is key to arresting Stage 1 hypertension. But given the economics of a DASH diet and the genetics of Indians, they need more than just a diet. They need a structured and composite programme of lifestyle management with exercise as a key element from early childhood, say cardiologists.
DASH diet emphasises eating more fruits, vegetables, lean meat sources, nut, seeds and grains and limiting consumption of red meat, sodium, sugars and sugar-sweetened beverages. (File/ Getty Images)

The DASH (Dietary Approaches to Stop Hypertension) approach still seems the best lifestyle change that may reduce cardiovascular disease risk among the young and middle-aged adults with Stage 1 hypertension.

According to new research presented at the American Heart Association’s Hypertension Scientific Sessions 2022, (between September 7 and 10) in San Diego, widespread adoption of lifestyle changes, such as limiting heavy alcohol consumption and exercising regularly, may prevent thousands of deaths and save more than one billion dollars in health care costs over the next 10 years. The analysis found that adoption of the DASH diet could have the greatest benefit, with an estimated 15,000 heart disease events prevented among men and 11,000 among women.

What are the stages of hypertension

According to the 2017 joint American Heart Association and American College of Cardiology High Blood Pressure Guideline, stage 1 hypertension is defined as having a systolic (top number) level of 130-139 mm Hg or having a diastolic (bottom number) measure of 80-89 mm Hg. Stage 2 hypertension is defined as systolic measures of 140 mm Hg or higher, or diastolic measures of 90 mm Hg or higher.
The DASH eating plan is specifically designed to help manage blood pressure. The diet emphasises eating more fruits, vegetables, lean meat sources, nuts, seeds and grains and limiting consumption of red meat, sodium, sugars and sugar-sweetened beverages.

The research team found that 8.8 million adults in the US between the ages of 35 and 64, have untreated stage 1 hypertension and could improve with lifestyle changes, such as physical activity, sustained weight loss, moderating alcohol intake and adoption of the DASH diet.

“Nearly nine million young and middle-aged adults with untreated stage 1 hypertension represent a significant, impending burden for health care systems. Our results provide strong evidence that large-scale, healthy behaviour modifications may prevent future heart disease, related complications and excess health care costs,” Kendra D. Sims, Ph.D., M.P.H., a postdoctoral fellow at the University of California, San Francisco and co-lead researcher of this study was quoted as saying.

Reacting to the study, Dr Sanjay Kumar, Director, Cardiology, Fortis Escorts Hospital, Faridabad, says, “Two of the most studied diet plans with proven cardio-metabolic benefits are Mediterranean and Dash diets. These diet patterns have better long-term effects than selective dietary changes like low fat diets. Newer low carbohydrate ketogenic and paleo diets have faster short-term effects on weight and glycaemic control but in the long run, Dash and Mediterranean diets are more effective.”

What do doctors say about arresting stage 1 hypertension

“We know that DASH diet is extremely important, especially in controlling hypertension — specifically in Stage 1. Why was Stage 1 created? So, before the latest guidelines in 2017, this stage — where BP is between 132/139 and 180/189 — was considered as pre-hypertension or early hypertension. We do not refer to this stage as hypertension because then a very large population would classify as hypertensive. However ultimately people realise that this (their
blood pressure) is a problem they need to address. We, doctors, tend to use the term hypertension so that patients become more cautious and adopt treatment, which at this stage consists only of lifestyle modifications and no medicine,” says Dr Nagendra Singh Chauhan, Director, Interventional Cardiology, Heart Institute, Medanta Hospital, Gurugram.

Also Read |Can artificial sweeteners increase the risk of heart attack? How much sugar can one have then?

“Lifestyle modifications include exercise and diet — here DASH diet is extremely important. It is considered in the top eight best diets to get hypertension and cardiovascular diseases under control. It is a very simple diet and suggests that we stick to vegetables, protein, dairy, lean meat, nuts, fruits and avoid sweets, sugar, sweetened drinks, carbohydrates, easily digestible carbohydrates, fatty meat and saturated fat. This is a general fact — any diet with sweets and saturated fat is not good and now we are giving equal importance to both components. Additionally, you need to exercise. This again is known but what one needs to understand that in addition to the DASH diet, it will help manage the symptoms of hypertension especially in stage 1 and 2. While it is important even for stage 3 patients, it can prove to be the most effective if adopted in stage 1,” adds Dr Chauhan.

Indians need a composite programme

The bigger question is if Indians can afford a DASH diet. “A DASH diet recommends about eight servings of fruits and salads a day in addition to low fat dietary products. In a family of four, it means consumption of 2 to 3 kg of fruits a day. This is not there in most houses in the country primarily because of economic reasons. So, in a country like ours we should amend dietary patterns and adopt other lifestyle changes like physical activities, meditation and yoga,” says Dr Kumar.

1Online applications form for admissions to Ambedkar University Delhi now open
2Ghaziabad: Three interstate vehicle thieves arrested, two on the run
3Noida: Man booked for creating fake Instagram account of woman IPS officer

More from Delhi

Dr Chauhan echoes this viewpoint. “We need a structured programme to control hypertension in India, which involves public and private stakeholders, a condition which is most common in India where people under 35 and 40 are reporting it. We should inculcate the habits of eating a healthy diet in early childhood so that they don’t have issues of hypertension later,” he adds.
Balloon pill

Cutting Edge: With this balloon pill, you can lose weight without surgery, control sugar spikes (Indian Express: 20220914)

https://indianexpress.com/article/lifestyle/health-specials/cutting-edge-balloon-pills-surgery-sugar-spikes-8148289/

The CDSCO-approved regimen --- including the device and the back-end technology --- is expected to cost around Rs 3.5 lakh. But in case of widespread use in India, it could become cheaper in the future. In comparison, bariatric surgery may cost up to Rs 5-6 lakh.

The Central Drug Standard Control Organisation (CDSCO) recently approved a medical weight-loss device -- the Allurion Swallowable Capsule -- which its US makers believe to be a cutting edge step. (Representational: Pixabay)

Most overweight people don’t know where to begin and can do with a little help to get them started. A new pill may help them in this journey of self-determination and health improvement. It’s rather simple to use. Ingest it, keep it in the stomach where it swells up and cuts down your appetite.

384 drugs on essential medicines list

384 drugs on essential medicines list (The Hindu: 20220914)

https://www.thehindu.com/sci-tech/health/centre-releases-revised-list-of-essential-medicines/article65886165.ece

Ivermectin and mupirocin have been added, while ranitidine and sucralfate have been dropped.

Twenty-six drugs, including the common gastrointestinal medicines ranitidine and sucralfate, have been deleted from the revised National List of Essential Medicines (NLEM) 2022 released on Tuesday by Health Minister Mansukh Mandaviya.

Three hundred and eighty-four drugs find place in the NLEM, 2022 with the addition of 34 drugs, while 26 from the previous list have been dropped. The

Several anti-cancer drugs, antibiotics
Several anti-cancer drugs, antibiotics to become more affordable in India(The Hindu: 20220914)

https://www.thehindu.com/sci-tech/health/

Four major anti-cancer drugs - Bendamustine Hydrochloride, Irinotecan HCl Trihydrate, Lenalidomide and Leuprolide acetate which are effective in various types of cancers have been added to the list

Several anti-cancer drugs, antibiotics and vaccines will now become more affordable as they are among 34 new additions to the National List of Essential Medicines, with the government saying this will reduce "patients' out-of-pocket expenditure".

Anti-infectives like Ivermectin, Mupirocin and Meropenem have also been added to the list, taking the total drugs under it to 384.

Nasal saline

Twice-daily nasal saline flushing may reduce COVID-19 severity: Study (The Hindu: 20220914)


Flushing nasal cavity with saline solution helps get rid of dirt, viruses and anything else.

Starting twice daily flushing of the nasal cavity with a mild saline solution soon after testing positive for COVID-19 may reduce hospitalisation due to the viral disease, a study claims.

The technique involves mixing a half teaspoon each of salt and baking soda in a cup of boiled water and then putting it into a sinus rinse bottle, making it a safe, effective and inexpensive way that can have a vital public health impact.

"By giving extra hydration to your sinuses, it makes them function better," said Amy Baxter, from Augusta University, US.

Ayurveda

आयुर्वेद: चांद की रोशनी में रखा पानी हेल्थ के लिए है कमाल, जाने कैसे पीए मून चाँद बोतर(Hindustan :20220914)

Benefits of moon-charged water: चांद की चाँदनी में रखा पानी पीने से हेल्थ के लिए फायदेमंद होता है। माना जाता है कि ये आपके अपाके शारीरिक और भावनात्मक हेल्थ के लिए बाप्की अच्छा होता है।

आयुर्वेद: चांद की रोशनी में रखा पानी हेल्थ के लिए है कमाल, जानें कैसे पीए मून चाँद बोटर
Moon Charged Water: चंद्रमा की चांदनी के नीचे रखना यह आपकी हेल्थ के लिए कई तरह से फायदेमंद हो सकता है। रात भर चंद्रमा में रखें ताकि सुबह जब पीते हैं, तो यह आपकी सेहत और ब्यूटी के लिए काम कर सकता है। नीचे दिए गए चांदनी में रखने के लिए आपकी फायदेमंद हो सकता है। आयुर्वेद एक्सपर्ट्स का कहना है कि इस ग्राहन के पत्ते के रूप में यह चंदनी की ऊपरी सीमा से जुड़ी हुई है। आपकी सेहत और ब्यूटी के लिए इसे वहां रखें।

यह भी पढ़ें: यहाँ या यहाँ, आयुर्वेद के मुताबिक जानिए क्या है चंदनी फायदेमंद

रिपोर्ट का मानने को-

1) खाली पेट पीएं- सुबह जाने के बाद आपको खाली पेट चंद्रमा आवश्यक नहीं है। यह सबसे आसान और सबसे कारगर तरीका है।

2) चावल में कोई नहीं- आप इसका इस्तेमाल चावल में भी कर सकते हैं। चंद्रमा की ऊपरी सीमा को पनीर के लिए आयुर्वेद में चंद्रमा का इस्तेमाल करते हैं। यह भी पढ़ें: आयुर्वेद: धूप में रखना पानी के है कई फायदे, जानें कैसे तैयार करें सन चावल बिंटे
नोट- मून चार्ज बॉटर हेल्थ के लिए, फायदेमंद हैं और इसके कोई साइड इफेक्ट नहीं हैं। लेकिन फिर भी इसको पीने से पहले आपको डॉक्टर से सलाह लेनी चाहिए।