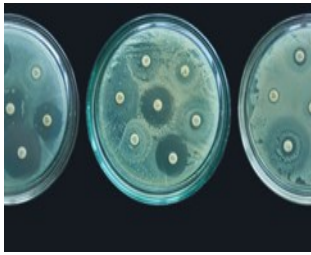




Farming, Pharmaceutical And Health Pollution Fuelling Rise In Superbugs, UN warns



Pollution from livestock farming, pharmaceuticals and healthcare is threatening to destroy a key pillar of modern medicine, as spills of manure and other pollution into waterways are adding to the global rise of superbugs, the UN has warned. Animal farming is one of the key sources of strains of bacteria that have developed resistance to all forms of antibiotics, through the overuse of the medicines in farming. Pharmaceutical pollution of waterways, from drug manufacturing plants, is also a major contributor, along with the failure to provide sanitation and control sewage around the world, and to tackle waste from healthcare facilities. Resistant superbugs can survive in untreated sewage. The findings of the new report, published on Tuesday, show that

pollution and a lack of sanitation in the developing world can no longer be regarded by the rich world as a faraway and localised problem for poor people.

When superbugs emerge, they quickly spread, and threaten the health even of people in well-funded healthcare systems in the rich world. Poor sanitation and healthcare, and a lack of regulation in animal farming, create breeding grounds for resistant bacteria, and threaten global health as a result, the UN Environment Programme found in the report. As many as 10 million people a year could be dying by 2050 as a result of antimicrobial resistance (AMR), according to the UN, making it as big a killer as cancer is today. The rise of superbugs will also take an economic toll, resulting in the loss of about \$3.4tn a year by the end of this decade, and pushing 24 million people into extreme poverty.

Inger Andersen, executive director of UNEP, said: "Pollution of air, soil and waterways undermines the human right to a clean and healthy environment. The same drivers that cause environmental degradation are worsening the antimicrobial resistance problem. The impacts of anti-microbial resistance could destroy our health and food systems." She called for urgent action to halt the pollution. "Cutting down pollution is a pre-requisite for another century of progress towards zero hunger and good health," she said, at the launch of the report at the sixth meeting of the Global Leaders Group on AMR in Barbados on Tuesday. The report found that sewage, poor sanitation, and the inadequate disposal of waste were all contributors to the problem. Simon Clarke, microbiologist at the University of Reading, who was not involved with the report, said people often failed to recognise how big a difference antibiotic use made to modern medicine. "Because of the effectiveness of antibiotics, we have perhaps forgotten the deadly impact that many infections had in the past. The risk of doing nothing is that every injury, operation or routine trip to hospital comes with the risk of picking up a lethal infection." Superbugs have been associated in the past with hospital acquired infections, such as MRSA. But that was changing, warned Oliver Jones, professor of chemistry at RMIT University in Melbourne, Australia. "We tend to think of antibacterial resistance as being a problem associated with hospitals. What this report shows is that antibiotics and other medications ending up in the environment is a major factor in the spread of antibiotic resistance and something we need to pay attention to sooner rather than later," he said.

The planet's most important stories. Get all the week's environment news - the good, the bad and the essential Governments and private sector investors in the developed world should wake up to the risks and provide the resources to tackle pollution in the developing world, which would be in their own self-interest, the report suggested. Farming must also be a key focus, added Matthew Upton, professor of medical microbiology at the University of Plymouth. "Although the situation is improving in some parts of the world, vast amounts of antimicrobials are used to treat and prevent infections in food animals. Improved husbandry and other infection prevention and control methods like vaccination should be used to reduce infections and the need for antimicrobial use, which in turn limits environmental pollution with antimicrobials, antimicrobial residues and resistant microbes. This is particularly applicable in aquaculture, which is going to be a major source of aquatic protein by 2050," he said. Catrin Moore, senior lecturer at St George's, University of London, drew parallels with the failure by the UK's water companies and government to control the widespread release of sewage into rivers and beaches. "This report reminds me that high levels of AMR could ultimately be on my doorstep, and in the water that I swim through with untreated human waste being released into local waterways," she said. "Although the highest burden of AMR is found in low- and middle-income countries, and resistant bacteria can be spread easily - they show no respect to country borders. Ultimately if resistant pathogens are increasing in my local environment, reducing the burden of mortality and morbidity due to AMR will be an impossible task." (Source: The Guardian)

Children In Mental Health Crisis Spent More Than 900,000 Hours In A&E In England



Children suffering mental health crises spent more than 900,000 hours in A&E in England last year seeking urgent and potentially life-saving help, NHS figures reveal. Experts said the huge amount of time under-18s with mental health issues were spending in A&E was “simply astounding” and showed that NHS services for that vulnerable age group were inadequate. Children as young as three and four years old are among those ending up in emergency departments because of mental health problems, according to data obtained by Labour.

Dr Rosena Allin-Khan, the shadow mental health minister, who is also an A&E doctor, said: “With nowhere to turn, children with a mental illness are left to deteriorate and reach crisis point – at which time A&E is the only place left for them to go. Emergency departments are incredibly unsuitable settings for children in crisis, yet we’re witnessing increasingly

younger children having to present to A&E in desperation.” Young people who endured long A&E waits included those with depression, psychosis and eating disorders as well as some who had self-harmed or tried to kill themselves, doctors said.

Allin-Khan obtained data under freedom of information laws from 81 acute hospital trusts in England – accounting for 73% of them – which showed that under-18s spent 657,953 hours in their A&Es in 2021-22 where their chief complaint was related to their mental health. The MP then used the average number of hours at those 81 trusts to estimate that children and young people across all the 111 trusts she surveyed spent a total of 901,640 hours in an emergency department – or just under 103 years. “The number of hours young people in mental health crisis have spent in A&E – an often chaotic and stressful environment – is simply astounding,” said Deirdre Kehoe, the director of training and services at the charity Young Minds. “It is inexplicable that young people are waiting so long for what is meant to be urgent care.”

The figures are likely to reflect that under-18s in a mental health crisis in A&E often have to wait a long time either for an assessment or treatment by specialists and also for a bed in a child and adolescent mental health residential unit. “These are truly shocking figures. It’s deeply distressing for a child in a mental health emergency to have to wait for care for hours at a time,” said Andy Bell, the interim chief executive of the Centre for Mental Health thinktank. The number of hours spent in A&E has risen in recent years at the same time as more children and young people are suffering from mental health disorders. For example, the proportion of 17- to 19-year-olds with a probable disorder jumped from 10% in 2017 to 26% last year, partly driven by the Covid-19 pandemic. Similarly, the number of estimated total hours under-18s have spent in A&E has soared from 698,411 in 2017-18 to last year’s 901,640, Allin-Khan’s NHS data shows. Young people in the midst of serious mental turmoil are having to go to A&E, which is designed to treat physical rather than mental health problems, because there are so few out-of-hospital services available for them, especially early intervention support.

Bell said: “While the NHS is expanding children’s mental health services, it’s struggling to meet growing levels of need. And without effective early help in communities, children have to wait until they reach crisis point to get support, placing yet more pressure on emergency services and inpatient beds.” Allin-Khan said: “Children’s mental health services have reached crisis point with an explosion in demand, inadequate service provision at community level and a shortage of child and adolescent mental health service beds. It is heartbreaking and totally unacceptable that, as a result of years of government neglect, community [mental health] services are failing our children.”

Data supplied by University hospital Southampton NHS trust showed that a three-year-old whose chief complaint was related to mental health spent five hours and 28 minutes in its A&E in 2021-22. A year before, a four-year-old had also spent two hours and 28 minutes there. That trust has also experienced a dramatic increase in the number of under-18s in mental health crisis ending up in A&E. In 2012-13 it treated 21 young people, who spent 92 hours between them in its emergency department. But in 2021-22 it had 230 children who spent 2,812 hours in A&E. Similarly, the longest wait in A&E experienced by any under-18 there rose from 20 hours and 12 minutes in 2012-13 to 50 hours and five minutes in 2021-22.

Allin-Khan said a Labour government would ensure that every school provided access to mental health support for pupils, set up an “open access hub” in every community and recruited 8,500 new mental health staff, paid for by closing tax loopholes. In a report this week on NHS mental health services the National Audit Office said children and young people were among the groups who encountered the longest waits for care and treatment for mental health issues. Kehoe said: “A&E departments are not the right place for people experiencing what can be one of the most distressing times in their life, let alone children this young. The recent NHS announcement that mental health professionals will now be based in ambulance control centres is a clear acknowledgment that people in mental health crisis need specialist support.”

The Department of Health and Social Care declined to respond directly to under-18s’ long stays in A&E. A spokesperson said: “We are investing an extra £2.3bn a year into mental health services, so that an additional 2 million people can get the support they need, including an additional 345,000 children and young people. “We are also investing £150m into schemes that address pressures on local urgent and emergency mental health care pathways and support people to be cared for closer to home, including alternatives to A&E and hospital admission such as crisis houses, safe havens and step-down services.” The spokesperson added that there were 287 mental health support teams in about 4,700 schools and colleges across the country, which would increase to 400 by April. Unlike many others, the Guardian has no shareholders and no billionaire owner. Just the determination and passion to deliver high-impact global reporting, always free from commercial or political influence. Reporting like this is vital for democracy, for fairness and to demand better from the powerful.

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Senator Warren Urges U.S. Patent Office To Scrutinize Merck's Keytruda



U.S. Senator Elizabeth Warren sent the nation's top patent regulator a letter urging close scrutiny of Merck & Co's (MRK.N) requests for new patents on its blockbuster cancer treatment Keytruda, saying further efforts to protect the drug could be an abuse of the system. "It is not at all clear that Merck is doing anything other than extending its monopoly power over the drug," Warren wrote to Kathi Vidal, director of the United States Patent and Trademark Office (PTO) in the letter sent on Wednesday and seen by Reuters. Senator Bernie Sanders, as well as Representatives Katie Porter and Pramila Jayapal also signed the letter. All four members of Congress are Democrats. They expressed

particular concern over Merck's efforts to patent a subcutaneous version of the currently infused drug, which Reuters reported on late last year.

They wrote that Merck's use of dozens of patents to fend off Keytruda competitors "appear(s) to be an example of the anti-competitive business practices ... that we have long been concerned about." Merck in a statement said it is "continuously innovating to enhance the benefits of Keytruda in order to reach greater numbers of patients and to increase efficacy and convenience of the treatment."

"When appropriate, Merck protects this additional innovation through the filing of patent applications, particularly when we view the innovation as novel, useful and non-obvious," a Merck spokesperson said by email.

Merck, which reported \$20.9 billion in 2022 sales of Keytruda, has relied on the immunotherapy to fuel its growth. The treatment, first approved in 2014, harnesses the body's own immune system to fight cancers with dramatic results. Against advanced lung cancer, it has led to a five-year survival rate in about one-quarter of people compared to 5% historically for the disease. It initially demonstrated impressive survival benefits in the deadliest form of skin cancer and has since been approved for many types of cancer.

The members of Congress wrote that subcutaneous injections do not represent novel improvements for drugs, as "medications have been injected under the skin since insulin was discovered in 1921." They urged Vidal to "give close scrutiny to any of Merck's requests for new patents for Keytruda, and reject those that do not clearly meet the agency's standards." Clinical studies have shown that patients prefer subcutaneous injections to intravenous administration, which can be time-consuming and invasive. Merck said the easier-to-use formulation of Keytruda will be particularly important for treatment of earlier stage disease, as patients may be on therapy for a longer duration. (Source: Reuters)

Gland Pharma To Invest ₹400 Crore For Expanding Hyderabad Capacity



Gland Pharma will be investing over ₹400 crore in adding up capabilities to their existing facility in the Genome Valley here to manufacture biologicals, biosimilar, antibodies and recombinant Insulin. The company will recruit more than 500 workforce for this expanded facility, mostly from the nearby places.

The Hyderabad-based company had established their biopharmaceutical facility in February 2022 at Genome Valley with an investment of ₹300 crore to manufacture vaccines, biologicals, biosimilar, antibodies and others. Recruitment of 200 workforce has already been completed in the facility.

The expanded site is envisaged to meet the national and international regulations to be followed in the manufacturing of biological products as applicable and will be built under the GMP guidelines applicable for the respective product lines.

The announcement was made after Telangana Industries' Minister KT Rama Rao with the Managing Director and Chief Executive Officer of Gland Pharma, Srinivas Sadu here.

"This project investment is estimated to be about ₹400 crore and expected to generate employment to about 500 personnel," Srinivas Sadu said in a release.

K.T Rama Rao said: "The expansion will be focussed on advanced areas like Biologicals, Biosimilar, Antibodies and recombinant Insulin, all of which are areas where the State is focussed on building capabilities and consolidating our leadership position." Gland Pharma Ltd, is a generic injectable focused pharmaceutical company, continuously striving towards providing quality products for people's healthcare for more than forty years. (Source: Business Line)

BDMA To Set Up Pharma Technology Training Centre In Hyderabad



The Bulk Drug Manufacturing Association (BDMA) is setting up a technology and training centre in the pharma cluster at Jeedimetla in Hyderabad.

This is the first instance in the country of an industry association coming forward to establish a skill-up gradation centre for the employees of their industry. The proposed facility will be operational from April this year.

The technology centre will act as a centralised location for high-end research and testing and will strengthen the role of the pharma cluster as a collaborative and competitive landscape for pharmaceutical manufacturing. “The training centre is aimed at providing specific training to manpower engaged in the manufacturing operations and quality control in API industry,” RK Agrawal, National President BDMA said in a release.

Training will be given to fresh graduates making them suitable for the bulk drug industry where member units can train their new recruits. Also, specialised training will be given to existing staff to upgrade their skills in the pharma sector. “There is a huge requirement of skilled manpower in view of upcoming Hyderabad Pharma City and industry growth.” he added. The facility is being set up with contributions from

AstraZeneca Expands Its Portfolio By Bringing Rare Disease Therapy For Patients In India



AstraZeneca India, a biopharmaceutical company, announced its entry into rare disease therapy in India after receiving the regulatory approval for ‘Selumetinib’. It aims to address the severe unmet needs of patients living with rare diseases and transform their quality of life. In India, there is neither a clear estimate of the rate of mortality or morbidity nor an understanding of the disease burden on the public healthcare system, when it comes to rare diseases. According to the company, more than 400 million people worldwide are affected by rare diseases, and currently, there are about 7000 recorded and identified rare diseases.

“Patients with rare diseases need an early and accurate diagnosis, timely treatment, and long-term supportive care. With less than 6 per cent of rare diseases having any kind of treatment, coupled with the extremely limited availability of any rare disease treatment in the country, expectations from global pharma companies are high,” said Prasanna Shirol, Co-founder and Executive Director of ORDI (Organisation for Rare Diseases India). Sanjeev Panchal, Country President and Managing Director, AstraZeneca India, “As a country, we need to accomplish a lot in this therapy area, right from diagnosis, treatment, access, and education. With this milestone approval, we are bringing transformative medicines to patients living with rare diseases in India who currently have limited treatment options or no available treatment at all.” On February 28, 2023—the day dedicated to rare diseases—AstraZeneca also joined hands with ORDI, a non-profit organisation working to improve the lives of patients living with rare diseases. The collaboration is primarily to showcase support for the cause and enhance the conversation. As a gesture of its support, AstraZeneca will be participating in ORDI’s flagship ‘RaceFor7’, a multi-city 7-kilometer run commemorating Rare Disease Day in the country. (Source:NDTV)

Bristol-Myers Squibb to Invest \$100 Million In Hyderabad To Set Up Innovation Centre



US-based Drug maker Bristol-Myers Squibb will invest \$100 million in Hyderabad to set up its first science and technology innovation centre in India, which will support a range of its global drug development activities. The company has entered into a Memorandum of Understanding (MoU) in this regard in the presence of Telangana Minister for Industries K T Rama Rao on Thursday. “A missing piece in our global presence is India. There is good talent here that can be harnessed.

Samit Hirawat, Executive Vice President, Bristol-Myers Squibb said at the signing of the MoU today adding that Hyderabad was an instant choice to locate the innovation centre. The proposed innovation centre, which is likely to be operational by the third quarter of the financial year, will have 1,500 professionals of different skill sets over the next three years, he said, adding: “Our mission is to develop specialty medicines in key areas such as oncology, cardiovascular among others. The innovation centre to be set up in Hyderabad diverse professionals including from IT, physicians, medical writing experts among others.” Saying that he was ‘super thrilled’ to welcome Bristol-Myers Squibb to India in general and Hyderabad in particular, K T Rama Rao said Hyderabad was ideally suited for a mix of Information Technology and Biotechnology and pharma and life sciences companies could leverage this strength. “I have also requested Bristol-Myers Squibb to consider setting up a manufacturing facility in Telangana,” he added. (Source: Business Line)