

## Health &amp; Science

# 100 years on, influenza holds lessons for next pandemic

## World remains ill-prepared for the next global killer

**PARIS:** It was the disease to end all others, infecting a third of humanity, killing tens of millions in their beds and prompting panicked talk of the end of days across continents still reeling from war. One hundred years on from the influenza outbreak known as the Spanish Flu, scientists say that while lessons have been learned from the deadliest pandemic in history, the world is ill-prepared for the next global killer.

In particular, they warn that shifting demographics, antibiotic resistance and climate change could all complicate any future outbreak. "We now face new challenges including an ageing population, people living with underlying diseases including obesity and diabetes," University of Melbourne Dr Carolien van de Sandt, at the Peter Doherty Institute for Infection and Immunity, told AFP yesterday.

Scientists predict that the next influenza pandemic-most likely to be a strain of bird flu that infects humans and spreads rapidly across the world via air travel-could kill up to 150 million people. Van de Sandt and her team examined reams of data on the Spanish Flu, which tore across the planet in 1918. They also studied three further pandemics: the 1957 "Asian" flu, the "Hong Kong" flu of 1968 and 2009's swine flu outbreak.

They found that although the Spanish Flu infected one in three people, many patients managed to survive severe infection and others displayed only mild symptoms. Unlike most nations, which used war-time censorship to suppress news of the spreading virus, Spain remained neutral during World War I. Numerous reports of the sickness in Spanish media led many to assume the disease originated there and the name stuck.

It is now largely believed that the strain of flu in 1918 in fact originated among US servicemen and killed a disproportionately high amount of soldiers and young people, but researchers said things would be different this time around. In 1918, in a world struggling with the economic impact of global war, the virus was rendered deadlier due to high rates of malnutrition.

But the team behind a new study, published in the Journal Frontiers in Cellular and Infection Microbiology, said the next outbreak will spread in the developed world

among a population struggling with record obesity and diabetes rates.

### Double burden

"What we know from the 2009 pandemic is that people with certain diseases (such as obesity and diabetes) were significantly more likely to be hospitalized with, and die



### Global warming could impact in other ways

from, influenza," Kirsty Short, from the school of Chemistry and Biosciences at the University of Queensland, said. The team warned that the world faced a "double burden" of severe disease due to widespread malnutrition in poor nations-exacerbated by climate change-and over nutrition in richer ones. And global warming could impact in other ways.

Van de Sandt said that since many influenza strains begin in birds, a heating planet could alter where the next outbreak emerges. "Climate change may change migration patterns of birds, bringing potential pandemic viruses to new locations and potentially a wider range of bird species," she said. One thing the investigation into 1918 threw up was that older people fared significantly better against the virus strain than younger adults. The team theorized that this was due in part due to older citizens having built up some immunity through previous infections.

Most of those killed in 1918 — roughly 50 million people, or 2.5 percent of those infected-died due to secondary bacterial infections, something that antibiotics helped



FLORIDA: An influenza vaccination is prepared for a patient at the CVS Pharmacy store's MinuteClinic in Miami, Florida. — AFP

alleviate during subsequent pandemics. But today many bacteria are immune to antibiotics. "This increases the risk that people again will suffer from and die as a result of secondary bacterial infections during the next pandemic outbreak," said Katherine Kedzierska, from Melbourne's Doherty Institute.

The authors sounded particular alarm over avian H7N9

— a virus that kills roughly 40 percent of people it infects, even if it cannot currently pass from human to human. "At the moment none of these viruses has acquired the ability to spread between humans, but we know that the virus only needs to make a few minor changes to make this happen and could create a new influenza pandemic," said van de Sandt. — AFP

## Dr. Danka explains importance of psychotherapy for cancer patients

By Faten Omar

**D**uring a media roundtable held at Dr. Abdulla Ghoul clinic in Shaab with Dr. Juliet Danka, Sociologist and associate professor at the American University of Kuwait, explained the importance of psychotherapy for cancer patients. "Providing a patient with psychotherapy could save him. The treatment becomes effective only when a patient learns to accept the disease. When a patient thinks about the disease negatively, they tend to give up easily, which slows down the recovery process. Understanding the emotional reactions of patients with cancer could help in improving their recovery. A cancer patient's mental well-being is just as important as their physical," she said.

Danka affirmed that the shock is the initial reaction from anyone who receives such a diagnosis. Fear, is an emotion that most likely remains with a patient not only during the treatment but long after the treatment has been completed. Cancer patients will always have the fear of the new changes and how the community will react towards their diagnosis. Danka advises cancer patients to follow a



Dr. Danka. — Photo by Joseph Shagra

specific diet for a more effective treatment. It is very important for a cancer patient to be in a positive environment with family members being very supportive and emotionally strong. The patient should live life as normally as possible and carry on by celebrating occasions like birthdays and holidays as a family. Meeting and talking with cancer survivors not only increases hope but also helps them share their feelings with someone who is familiar with their condition.

"I advise my patients to express their feelings but prevent taking sympathy from the people around them at the same time. Visitation hours should be about staying supportive and acting as normal as possible. Most patients do not like to be treated differently or to be sympathized with," she added.

### Social media and depression

Danka also revealed that the most frequent people to come to the clinics are parents, who suffer from the control of social media on their children. "Nowadays, social media has become a need for children. Parents give electronic devices to children as a means of distraction and to keep them busy while they carry on with their chores. Social media negatively affects the lives of our children so we have to control it as much as we can by controlling the usage of it," she added.

She said that the first step to control the usage of smart devices is that parents must control themselves on how they use their smartphones while they are around their children, as children tend to copy them. "Electronic devices must be avoided during family gatherings or on the dining table. Parents must be strict in making such decisions and should not give up even if the child starts to cry. We must prepare our child for the hard life they will face in the future," she said.

On the other hand, people in Kuwait still believe that going to therapy means that you are crazy although most people are depressed because of changes in their lives. "You may be depressed if for more than two weeks you've been feeling sad, low or miserable, or have lost interest or pleasure in usual activities. It's important to remember that we all experience some of these symptoms from time to time, and it may not necessarily mean you're depressed. Equally, not everyone who is experiencing depression will have all of these symptoms." She noted that the signs and symptoms of having depression are insomnia, withdrawal from close family and friends, not being able to enjoy activities, lacking confidence, feeling unhappy and miserable, tired all the time, loss of appetite and significant weight loss or gain.

a tonne of CO2 taken out," said lead coordinating author Myles Allen, head of the University of Oxford's Climate Research Program.

Drawing from more than 6,000 recent scientific studies, the report laid out four pathways to that goal. The most ambitious would see a radical drawdown in energy consumption coupled with a rapid shift away from fossil fuels and a swift decline in CO2 emissions starting in 2020. It would also avoid an "overshoot" of the 1.5C threshold. A contrasting "pay later" scenario compensates for a high-consumption lifestyle and continued use of fossil fuels with a temporary breaching of the 1.5C ceiling.

It depends heavily on the use of biofuels. But the scheme would need to plant an area twice the size of India in biofuel crops, and assumes that some 1,200 billion tons of CO2 — 30 years' worth of emissions at current rates-can be safely locked away underground. "Is it fair for the next generation to pay to take the CO2 out of the atmosphere that we are now putting into it?", asked Allen. "We have to start having that debate."

The stakes are especially high for small island states, developing nations in the tropics, and countries with densely-populated delta regions already suffering from rising seas. "We have only the slimmest of opportunities remaining to avoid unthinkable damage to the climate system that supports life as we know it," said Anjaj Abdulla, chief negotiator at UN climate talks for the Alliance of Small Island States (AOSIS).

Limiting global warming to 1.5C comes with a hefty price tag: some \$2.4 trillion of investments in the global energy system every year between 2016 and 2035, or about 2.5 percent of world GDP. That amount, however, must be weighed against the even steeper cost of inaction, the report says. The path to a climate-safe world has become a tightrope, and will require an unprecedented marshalling of human ingenuity, the authors said.

"The problem isn't going to be solved with a silver bullet," Ove Hoegh-Guldberg, director of the University of Queensland's Global Change Institute, told AFP. "We need a hail of silver bullets." The IPCC report was timed to feed into the December UN climate summit in Katowice, Poland, where world leaders will be under pressure to ramp up national carbon-cutting pledges which-even if fulfilled-would yield a 3C world. The week-long meeting in Incheon, South Korea-already deep into overtime-deadlocked on Saturday when oil giant Saudi Arabia demanded the deletion of a passage noting the need for global CO2 emissions to decline "well before 2030". — AFP

## Lion cub found abandoned in Dutch field

**THE HAGUE:** Dutch police were on Sunday seeking the owners of a small lion cub found abandoned in a cage in a field outside the central city of Utrecht, police and news reports said. "On Sunday, we received quite an extraordinary message: 'a witness has found a mini-lion in a cage in a pasture,'" local police said on their Facebook page. "When we arrived at the scene, we discovered a lion cub in a cage. It seems to have been abandoned," the police said, estimating the little feline to be about four months old.

The cub was first spotted by a jogger near the small village of Tienhoven, about 10 kilometers north of Utrecht, a local news report said. The cub was taken for examination by a veterinarian, and then to the Lion Foundation in northern Netherlands, the NOS public broadcaster said. "Its cage was not very sturdy and there was a chance that it could have escaped," added vet Peter Klaver, adding that the police initially asked him to sedate the animal.

"But eventually that was not necessary and we managed to get the lion cub into my car, cage and all," he told the RTL private broadcaster. Klaver said he believed the cub was dumped because it was getting too big to handle. "I've been all over the world to sedate animals, also lions and tigers. This is the first time something like this has happened to me," the vet said.

Robert Kruijff, director of the Lion Foundation said the cub was doing well and did not seem to be malnourished. "We now have him in quarantine, and he needs a lot of rest," Kruijff told the NOS, adding the animal was being held in isolation from other lions. "A caregiver is giving him small pieces of meat," said Kruijff, whose foundation mainly takes care of former circus animals.

Meanwhile local police and the Dutch food and goods watchdog appealed to the public for information leading to the lion cub's owners. —AFP

## UN warns paradigm shift needed to avert global climate chaos

**INCHEON, South Korea:** Avoiding global climate chaos will require a major transformation of society and the world economy that is "unprecedented in scale," the UN said yesterday in a landmark report that warns time is running out to avert disaster. Earth's surface has warmed one degree Celsius (1.8 degrees Fahrenheit) — enough to lift oceans and unleash a crescendo of deadly storms, floods and droughts-and is on track toward an unlivable 3C or 4C rise.

At current levels of greenhouse gas emissions, we could pass the 1.5C marker as early as 2030, and no later than mid-century, the Intergovernmental Panel for Climate Change (IPCC) reported with "high confidence". "The next few years are probably the most important in human history," Debra Roberts, head of the Environmental Planning and Climate Protection Department in Durban, South Africa, and an IPCC co-chair, said.

A Summary for Policymakers of the 400-page tome underscores how quickly global warming has outstripped humanity's attempt to tame it, and outlines options for avoiding the worst ravages of a climate-addled future. "We have done our job, we have now passed on the message," Jim Skea, a professor at Imperial College London's Centre for Environmental Policy and an IPCC co-chair, said at a press conference. "Now it is over to governments-it's their responsibility to act on it." Before the Paris Agreement was inked in 2015, nearly a decade of scientific research rested on the assumption that 2C was the guardrail for a climate-safe world. The IPCC report, however, shows that global warming impacts have come sooner and hit harder than predicted.

### Pay now or pay later

"Things that scientists have been saying would happen further in the future are happening now," Jennifer Morgan, Executive Director of Greenpeace International, told AFP. To have at least a 50/50 chance of staying under the 1.5C cap without overshooting the mark, the world must, by 2050, become "carbon neutral", according to the report. "That means every ton of CO2 we put into the atmosphere will have to be balanced by

## Philippine resort city chooses low-carbon path

**PUERTO PRINCESA, Philippines:** When Theresa Walgrave and her husband set up their 15-room resort in Puerto Princesa, a city on the Philippine island of Palawan, they worried about mosquitoes and monsoon damp - and the high cost of electricity. That's when the island's Zero Carbon Resorts program approached them with suggestions on how to save energy and costs - from solar panels and LED lights to rainwater harvesting, refillable bottles and bamboo roofs for extra cooling.

The Walgraves enrolled in the program, made the changes, and achieved significant savings. Theresa Walgrave said. "They were not very big adjustments, but we were able to cut our electricity and water use by a fair amount," she said. "Many guests are also mindful and appreciate the fact that we are zero carbon. And we are happy that we make a difference to not just Puerto Princesa and Palawan, but also the Earth."

In 2011, Puerto Princesa became the first Southeast Asian city to earn a "zero carbon" label, meaning it produces no more climate-changing emissions than it can offset, according to an audit by environmental partnership SEED and the Manila Observatory. In fact, by preserving its forests, using "green building" design and shunning the diesel that once powered generators in homes and hotels, the city is "carbon negative" - meaning it pulls more carbon dioxide from the atmosphere than it emits, according to the audit.

That makes it an outlier in the Philippines. But it - like other Philippines cities - has motivation to act: the nation is one of those most severely hit by wild weather triggered by climate change, with its coastal cities particularly vulnerable to rising sea levels and deadly storms. A report by the world's leading climate scientists, released yesterday, gives a stark warning that such threats will continue to grow unless the world can hold hives in global temperatures to 1.5 degrees Celsius - just a half a degree higher than today.

Around the world, cities are at the frontline of the battle to curb emissions, as urbanisation surges. More than two-thirds of the world's population is forecast to live in cities by 2050, according to the United Nations. Cities consume also more than two-thirds of the world's energy and account for about three-quarters of carbon dioxide emissions, according to the UN.

"High-growth Southeast Asian cities are very vulnerable, yet lagging behind in incorporating more renewable energy generation in their plans," said Rob Roggeman, a professor and urban sustainability expert at the University of Technology Sydney. "Often, it is the lack of political will that is the reason. But it can be done - no matter how big or small the city - with the participation of residents and the private sector," he said.

Most cities around the world are already dealing with the effects of climate change, from hotter and more humid summers to deadlier storms and frequent flooding. A growing number are taking action. Leaders of some of the biggest cities recently vowed to make all buildings carbon neutral by 2050. More than 70 cities have pledged to become zero carbon by mid-century. Admittedly, Puerto Princesa is a smaller city, with a population of 223,000 people, according to the 2010 census.

But Palawan island, with its white-sand beaches and clear blue waters, is seen as a green leader in the country. Twenty-five years ago, the island was being "ravaged" by illegal logging and fishing, and rampant mining, said Edward Hagedorn, who was elected mayor of Puerto Princesa in 1992. Hagedorn - who hailed from a family of loggers - vowed in his victory speech to make the city "clean and green", and protect its natural resources. —Reuters