

## PROTECTING CITIZENS' DATA

Protecting citizens' data has become an increasingly critical issue in our digital age, where vast amounts of personal information are collected, stored, and shared by various organizations, including governments, corporations, and tech companies. With the rise of data breaches, identity theft, and cyber-crime, ensuring the security and privacy of citizens' data is paramount. Here's a comprehensive look at why data protection is essential, the risks involved, and the measures that can be taken to safeguard personal information.

Citizens' trust in government and private institutions relies heavily on their ability to safeguard personal data. When data breaches occur, public confidence is undermined, leading to skepticism about how organizations handle sensitive information.

Individuals have the right to control their personal data. Protecting this data is crucial for maintaining privacy and ensuring that individuals can live without constant surveillance or unauthorized access to their information.

Many countries have enacted data protection laws, such as the General Data Protection Regulation (GDPR) in the European Union and the California Consumer Privacy Act (CCPA) in the United States. Organizations must comply with these regulations to avoid legal repercussions and hefty fines.

Cyberattacks are becoming increasingly sophisticated. Protecting citizens' data helps mitigate the risks of identity theft, financial fraud, and other criminal activities that can arise from unauthorized access to personal information.

High-profile data breaches have affected millions of individuals. Cybercriminals often target organizations that store large amounts of personal data, exploiting vulnerabilities to gain access to sensitive information.

Cybercriminals use deceptive emails or messages to trick individuals into revealing personal information. These attacks can lead to identity theft and financial loss.

Many organizations fail to implement robust security measures to protect data. This can include poor password management, lack of encryption, and insufficient employee training on data security.

Organizations often share data with third parties for various purposes, such as marketing or analytics. If these third parties do not have adequate security measures, they can become weak links in the data protection chain.

Encrypting data makes it unreadable to unauthorized users. This is crucial for protecting sensitive information both in transit and at rest.

Implementing strict access controls ensures that only authorized personnel can access sensitive data. Role-based access controls can limit access based on job responsibilities.

Organizations should conduct regular security audits and assessments to identify vulnerabilities and ensure compliance with data protection regulations. This proactive approach helps to address potential issues before they lead to data breaches.

Organizations should invest in regular training programs to educate employees about data security best practices. This includes recognizing phishing attempts, managing passwords securely, and understanding data handling protocols.

Having a well-defined incident response plan is essential for organizations. This plan should outline the steps to take in the event of a data breach, including notifying affected individuals and regulatory bodies.

Organizations should only collect and retain data that is necessary for their operations. Reducing the amount of personal data collected minimizes the risk of exposure in the event of a breach.

Governments and organizations can conduct campaigns to raise awareness about data protection among citizens. This can empower individuals to take steps to protect their own data, such as using strong passwords and enabling two-factor authentication.

Protecting citizens' data is a multifaceted challenge that requires a coordinated effort from governments, organizations, and individuals. By understanding the importance of data protection, recognizing the risks involved, and implementing robust measures to safeguard personal information, we can create a safer digital environment. As technology continues to evolve, ongoing vigilance and adaptation will be essential to ensure that citizens' data remains secure and their privacy is respected. Ultimately, a commitment to data protection fosters trust and empowers individuals in an increasingly interconnected world.

## Param Rudra Supercomputers

In the ever-evolving landscape of technology, supercomputers play a pivotal role in advancing research, simulating complex systems, and solving intricate problems across various fields. One of the notable entrants in this realm is the Param Rudra, a high-performance computing (HPC) system developed by the Centre for Development of Advanced Computing (C-DAC) in India. This supercomputer marks a significant step forward in India's capabilities in computational research and scientific innovation.

Launched as part of India's initiative to bolster its computational infrastructure, the Param Rudra supercomputer is designed to tackle a diverse range of applications, including climate modeling, molecular dynamics, artificial intelligence, big data analytics, and advanced simulations. It is named "Rudra," signifying power and strength, which aptly reflects its computational prowess.

The system boasts a peak performance of over 6 petaflops, meaning it can perform more than 6 quadrillion calculations per second. This immense processing capability allows researchers to solve problems that were previously deemed too complex or time-consuming.

Param Rudra employs a heterogeneous architecture, integrating both CPU and GPU technologies to maximize computational efficiency. This design enables the system to handle a wide variety of workloads, from traditional numerical simulations to data-intensive machine learning tasks.

The supercomputer utilizes state-of-the-art interconnect technologies that ensure fast data transfer between nodes, significantly reducing latency and enhancing overall performance.

Param Rudra is designed to be scalable, allowing for easy expansion as computational demands grow. This flexibility ensures that the system can adapt to future technological advancements and increasing workloads. With a focus on sustainability, the design of Param Rudra incorporates energy-efficient components, reducing its carbon footprint while maintaining high performance.

To manage the heat generated by intensive computations, the supercomputer is equipped with sophisticated cooling systems that maintain optimal operating conditions. The applications of Param Rudra are vast and varied. In academia, it serves as a powerful tool for researchers in fields such as physics, chemistry, biology, and engineering. Some specific use cases include: Researchers can run simulations to predict climate changes, assess natural disasters, and analyze environmental impacts. This capability is crucial for informing policy decisions and preparing for future challenges. In pharmaceutical research, Param Rudra aids in simulating molecular interactions, helping scientists to identify potential drug candidates more efficiently. This accelerates the drug discovery process, ultimately leading to faster development of new therapies. The supercomputer's architecture allows for advanced machine learning tasks, enabling researchers to train complex models that can process vast datasets. This is particularly useful in fields like natural language processing and image recognition. With the explosion of data in various sectors, Param Rudra provides the computational power necessary to analyze and derive insights from large datasets, facilitating data-driven decision-making. The development of Param Rudra aligns with India's broader vision of becoming a global leader in science and technology. By investing in HPC infrastructure, the Indian government aims to foster innovation, enhance research capabilities, and support the nation's socio-economic growth.

Happiness is when what you think, what you say, and what you do are in harmony.

-Mahatma Gandhi

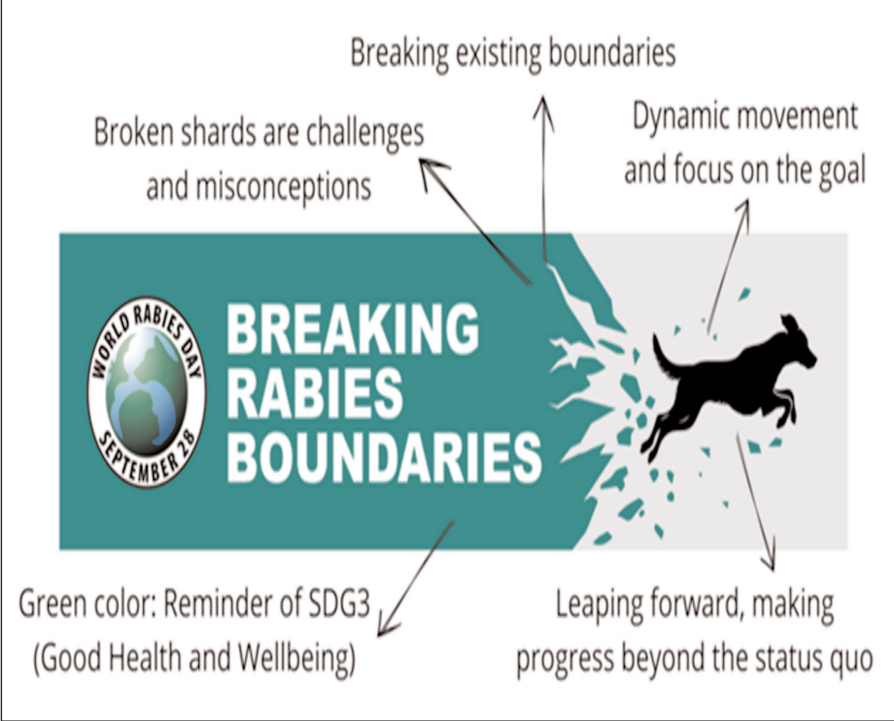
# World Rabies Day

■ DR. R.K. BHARDWAJ & DR. HIMANI SHARMA

World Rabies day is observed on 28th September every year for awareness of people about rabies and enhance prevention and control measures. The day is commemorated on the death anniversary of Louis Pasteur, who first developed an effective Anti-rabies vaccine. It was first initiated by Global Alliance for Rabies (GARC) in collaboration with many international human and veterinary health organisations like the World Health Organisation (WHO) and the World Organisation for Animal Health (OIE) in 2007 as an international campaign. The theme of 18th World Rabies Day 2024 is "Breaking Rabies Boundaries" underscoring the urgency to transcend limitations that are hindering our fight against this deadly disease. The chosen theme reflects the pressing need to move beyond the status quo, where rabies elimination remains elusive for many parts of the world, causing suffering and claiming both human and animal lives. "Breaking Rabies Boundaries" encapsulates a dual meaning, acknowledging not only the barriers within our control but also the transboundary nature of rabies itself. World Rabies Day aims to raise awareness about the impact of rabies on humans and animals, provide information and advice on how to prevent the disease in at-risk communities, and support advocacy for increased efforts in rabies control. It remains a significant health problem in many countries of the world. To achieve our goal of rabies elimination, we must break a spectrum of boundaries that currently inhibit our progress, including:

- 1) Breaking Disease Siloes
- 2) Lack of One Health Collaboration
- 3) Insufficient cooperation
- 4) Lack of innovation
- 5) Small-scale Programs
- 6) Disease Awareness

The spirit behind this theme encourages collaboration, partnership, and a joint approach towards rabies elimination or "Zero Deaths", in line with the "Zero by 30: Global Strategic Plan for the elimination of dog-mediated human rabies deaths by 2030". As we rally together to break these boundaries, World Rabies Day serves as a focal point for joining forces. From mass vaccination campaigns to educational events and policy advocacy, every effort counts. Zero by 30 is a collective goal that



India has accepted to eliminate such a dangerous and fatal disease. Human is the dead end host of rabies it means once a person got affected, death is sure. Until 1998, local authorities in India kept the population of stray dogs in check by impounding and euthanizing unclaimed canines. This technique was superseded by an animal birth control policy, commonly known as the ABC Program, due to demand from animal rights advocates. Stray dogs are imprisoned, medically sterilized, and released back into the region where they were picked up under this programme.

Rabies is one of the Neglected tropical disease that afflict people of more than 150 nations and territories worldwide, especially those living in poverty with low- and middle-income nations in the tropics and subtropics, and impose a major economic burden on these countries, according to the World Health Organization (WHO). Rabies is an acute and highly fatal viral encephalomyelitis which affects all warm blooded animals. It is caused by a number of viruses, but the Rabies Lyssavirus is the most significant in terms of public health, since it causes nearly all human and dog rabies infections. The origin of word is from Latin. Rabias or Sanskrit ??? (rabhasa). Kautilya's

Arthashastra (fourth century BC) describes how to create a variety of poison arrows. One recipe asks for combining different poisons with musk rat blood. "Anyone pierced with this arrow will be obliged to bite ten friends, who will in turn bite ten other people," wrote Kautilya. The inference is that musk rats were a rabies vector in India.

Dogs are the source of the vast majority of human rabies deaths, contributing up to 99 per cent of all rabies transmissions to humans. Rabies in human develops in two form i.e Furious and Paralytic form. Early symptoms may include fever and tingling at the site of bite followed by violent movements, uncontrolled excitement, hydrophobia, paralysis, coma and death.

In case of dog bite or scratch starts first aid treatment with washing of wound with soap and water for 10-15 minutes and wound should be cleaned with 70 percent alcohol (commercial spirit) or Betadine (Povidone iodine). Post bite antirabies vaccination should be immediately started with Human rabies immunoglobins (HRIG) in case of Category-3 bites. Once symptoms appear, the result is virtually always death. The time period between contracting the disease and the start of symptoms is usually one to three months

but can vary from less than one week to more than one year.

Rabies is a vaccine-preventable viral illness that affects more than 150 nations and territories worldwide. Low awareness of the need to seek health care after a dog bite claims the lives of more than 55,000 people each year, mostly in Asia and Africa. According to WHO, over 99 per cent of all human deaths caused by rabid dog bites happen in the developing world, with 95 per cent of deaths occurring in Africa and Asia. India is endemic for rabies, and accounts for 36 per cent of the world's rabies deaths. India also accounts for 65 per cent of the deaths due to rabies in the South East Asia region. It is alarming that within Asia, India has reported to have the highest incidence of rabies globally.

Control of rabies in wild animals is also of great importance which can only be feasible by oral anti-rabies bait vaccines. Control of rabies in stray dogs by Animal birth control programme and oral vaccination can be effective procedures to control rabies. The battle to control rabies by brutally killing the stray dogs has not yielded results. Mass vaccination is the only effective solution and vaccinating 70 percent of a dog population in endemic areas creates a barrier of healthy immune dogs which prevent the disease from spreading. According to World organization on Animal Health (OIE), the cost of vaccinating dogs remains minimal compared to the actual cost of emergency post-exposure treatments for the people who have been bitten and only 10 percent of the cost of these treatments would be sufficient to considerably reduce or even eliminate canine rabies.

So, let us take oath on this day to vaccinate our pets on regular basis and adopt stray dogs while vaccinating them against Rabies and controlling their population in addition to educating the people about facts regarding rabies, only then only we can control this disease. Notification of rabies is also important to prevent its spread. Holding local or national events is a great way to share the message of rabies prevention, whatever the size of the audience.

Every time someone is educated about rabies there is the possibility of saving a life.

(The writer is Professor, Veterinary Medicine in SKUAST-Jammu.)

# AIIMS Jammu: From Dream to Healthcare Giant - North India's Lifeline of Hope and Innovation!!

■ DR. ARJA SRIKANTH



In the picturesque town of Vijaypur, nestled within the Samba district of Jammu, the All India Institute of Medical Sciences (AIIMS) Jammu stands as a monumental achievement in healthcare infrastructure. This remarkable institution signifies a giant leap forward for the region of Jammu and Kashmir, as well as the neighboring areas of Ladakh, Punjab, and Himachal Pradesh. For years, these regions have grappled with limited access to advanced medical care, compelling many patients to undertake long journeys for specialized treatment. AIIMS Jammu emerges as more than just a healthcare facility; it is a beacon of hope, poised to redefine healthcare delivery and transform lives across North India.

The story of AIIMS Jammu is one of vision, commitment, and rapid transformation. Conceived under the Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), AIIMS Jammu embodies the Indian government's resolve to bridge the healthcare divide in remote and underserved areas. The construction of this state-of-the-art facility began with the laying of the foundation stone by Prime Minister Narendra Modi in 2019, and it has progressed at an extraordinary pace. With all 43 planned buildings nearing completion, this achievement highlights the dedication and efficiency that have characterized the project. In just five years, AIIMS Jammu has risen to become a symbol of modern healthcare infrastructure in India, and its impact is set to resonate across the region for decades to come.

At the helm of this transformative journey is Dr. Shakti Kumar Gupta, the Executive Director and CEO of AIIMS Jammu. His leadership has been pivotal in driving the rapid progress of the institute. Dr. Gupta's unwavering commitment, coupled with the support of a highly motivated team, has ensured that AIIMS Jammu remains on track to fulfill its mission. The institute proudly showcases its recruitment of faculty from across India, a testament to its readiness to offer world-class medical services, cut-

ting-edge research, and top-tier medical education.

Despite being relatively new, AIIMS Jammu is already blazing a trail in healthcare excellence. The facility offers specialized medical services across multiple disciplines, including cardiology, neurology, nephrology, and cancer care. These advanced services cater to a vast population that has long lacked access to such specialized care. Until now, patients from the Jammu region often had to travel to metropolitan cities like Delhi or Chandigarh for life-saving treatments. AIIMS Jammu is set to change that narrative, bringing state-of-the-art medical services much closer to home.

Since the commencement of its outpatient department (OPD), inpatient department (IPD), operating theatres (OT), and emergency services, AIIMS Jammu has been serving between 800 to 1,000 patients daily. The institute anticipates this number will rise to around 2,500 patients in the coming months. The OPD not only addresses the everyday healthcare needs of the local population but also offers specialized care for more severe conditions. This positions AIIMS Jammu as one of the largest OPD service providers in North India.

The successful launch of operation theatre services has already achieved remarkable surgical milestones, showcasing the exceptional care and expertise available at AIIMS Jammu. Accessibility to the institute is further enhanced by the ongoing completion of the Jammu National Highway, which runs adjacent to the facility.

This key infrastructure development is expected to facilitate easier access for patients from the farthest corners of Jammu, Kashmir, Ladakh, and even neighboring states, making AIIMS Jammu a healthcare lifeline for millions.

The vision for AIIMS Jammu extends beyond merely providing healthcare; the leadership is committed to establishing the institution as an "Institute of National Importance." This ambitious vision is well within reach, given the institute's focus on education, research, and patient care. AIIMS Jammu is not just a hospital, but a healthcare giant in the making, equipped with the

latest advancements in medical technology. Upon completion, the facility will feature 20 modular operating theatres, 193 intensive care unit (ICU) beds, 594 general beds, 30 Ayush beds, and 123 non-complementary beds dedicated to various specialties such as general medicine, orthopedics, obstetrics, and gynecology. This comprehensive setup is designed to offer extensive healthcare services across a broad spectrum of medical fields.

Moreover, dialysis services and chemotherapy for cancer patients have already commenced. The institute's diagnostic facilities are equipped with cutting-edge technology, including a 3 Tesla MRI, a state-of-the-art 128-slice CT scan, digital X-ray services, and endoscopy and colonoscopy services.

These resources are designed to provide a full range of diagnostic and treatment services for even the most complex cases. AIIMS Jammu has also operationalized 24/7 laboratory services, a Jan Aushadhi store, and an Amrit Pharmacy, along with a night shelter for patients and their families.

In a world where technology is reshaping every sector, AIIMS Jammu is at the forefront of technological innovations in healthcare. The institute's digital library, available 24/7 to students, faculty, and researchers, is part of its broader mission to foster a culture of continuous learning. Another technological breakthrough is the Indoor Patient Navigation System, developed in collaboration with IIT Delhi. This system, akin to an indoor GPS, offers real-time location tracking, helping patients navigate the expansive campus with ease. Whether heading to an appointment or finding a specific department, patients can efficiently reach their destinations, significantly reducing stress and confusion.

AIIMS Jammu is also leveraging technology to streamline administrative processes and enhance patient care. By partnering with the Centre for Development of Advanced Computing (C-DAC), the institute has implemented systems such as the Human Resource Management System (HRMS) and Hospital Management Information System (HMIS).

These digital solutions contribute to operational efficiency, ensuring that AIIMS Jammu remains a leader in healthcare delivery.

More than just a hospital, AIIMS Jammu is an educational powerhouse. With an annual intake of 100 MBBS students and 60 nursing students, the institute is actively shaping the next generation of healthcare professionals.

In August 2024, AIIMS Jammu welcomed its fifth batch of MBBS students, marking another milestone in its academic journey. The institute also offers postgraduate courses in medicine, surgery, and dentistry, with plans to introduce super-specialization courses by 2025. These programs will help bridge a critical gap in the healthcare system by producing highly skilled specialists capable of delivering top-tier care across various medical disciplines.

The research initiatives at AIIMS Jammu are equally impressive. The institute is spearheading a multi-centric research project across six AIIMS institutions, supported by a Rs. 25 crore grant from the Indian Council of Medical Research (ICMR). With 81 research projects currently underway, AIIMS Jammu is positioning itself as a leader in healthcare innovation, contributing to medical advancements not only in India but globally.

Community outreach is another cornerstone of AIIMS Jammu's mission. The institute is committed to extending its services to underserved populations, particularly in rural and remote areas. Through telemedicine, on-the-ground medical camps, and digital healthcare platforms, AIIMS Jammu is making healthcare accessible to those who need it most. For many families in these regions, AIIMS represents their first opportunity to receive advanced medical care without the burden of traveling to distant cities.

The institute's collaborations with top institutions both within India and abroad, including IITs, IIMs, and the University of Alabama at Birmingham, further enhance its research capabilities and foster knowledge exchange. These partnerships are critical in ensuring that AIIMS Jammu remains at the cutting edge of medical research and healthcare education.

AIIMS Jammu stands as a remarkable testament to the future of healthcare in India. With its state-of-the-art facilities, cutting-edge technology, and unwavering commitment to advancing medical education and research, the institute is poised to transform the lives of people in Jammu and beyond. AIIMS Jammu is not merely a hospital; it is a beacon of hope and a leader in healthcare innovation. Its journey from inception to completion serves as a powerful example of what can be achieved when vision and dedication converge.

AIIMS Jammu is setting a new benchmark in patient-centered care by providing comprehensive medical services under one roof, led by a team of nationally recognized clinicians. With state-of-the-art infrastructure, minimal wait times, and a seamless digital system that ensures continuity of care, AIIMS is not just about treating illnesses but about enhancing the overall healthcare experience.

The institute's commitment to affordability through government-sponsored health schemes makes top-tier healthcare accessible to all, while personalized support systems such as patient care managers, navigational assistance, and 24/7 laboratory and emergency care ensure that patients and their families feel guided and supported at every step.

AIIMS Jammu is embarking on an ambitious journey to establish itself as a "Global Village" with several 'Centres of Excellence,' aimed at ensuring the success and impact of its healthcare and educational endeavors. The institutional vision encompasses a multidimensional approach, featuring specialised centres in areas such as Institute of Traumatology, Telemedicine and Telecare, Nursing, Comprehensive Cancer Care, Advanced Studies in Hospital Administration, Ophthalmology, Dental Sciences, Forensic Sciences, and Comprehensive Community Outreach Services. For years to come, AIIMS Jammu will continue to shape the healthcare landscape, improving outcomes and offering a brighter future to all those it serves.

(The writer is Former Special Secretary, Government of Andhra Pradesh)