



प्रारंभ

**AN OFFICIAL NEWSLETTER OF
GMERS MEDICAL COLLEGE,
GANDHINAGAR**

2023 : Issue-4 (October - December)

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Welcome to GMERS Medical College, Gandhinagar

GMERS Medical College, Gandhinagar is an academic institution of repute under The Gujarat Medical Education and Research Society of Department of Health and Family Welfare, Government of Gujarat and located in the city of Gandhinagar, Capital of Gujarat State in Western India. It is one of the fastest growing Medical College of Gujarat. The institute strives to be among the top medical colleges in India in the spheres of medical education, research and



Dr. Shobhana Gupta
Dean

GMERS Medical College, Gandhinagar

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From Editorial Desk: A People-Centered Approach to Combat AMR

Antimicrobial Resistance (AMR) is an inherent evolutionary response to antimicrobial exposure, aggravated by human actions, including misuse in humans, agriculture, and animal health, alongside environmental contamination.[1] Its profound consequences pose challenges to treating common infections and conducting life-saving surgeries, heightening the risk of future pandemics involving drug-resistant pathogens. Infections stemming from resistant bacteria stand as a leading cause of death worldwide, with direct responsibility for 1.27 million deaths in 2019 and contributing to a staggering 4.95 million deaths globally.[2]. Notably, these mortality rates surpass those associated with HIV/AIDS, malaria, and drug-susceptible tuberculosis in HIV-negative individuals emphasizing the severity of the issue and surpassing earlier warnings.[3]

It is imperative to have country-specific, sector-oriented, and evidence-driven guidance to effectively combat AMR. This guidance is crucial for formulating, prioritizing, executing, and overseeing AMR interventions in the human health sector. Recognizing the interconnectedness of interventions, it places individuals, their requirements, and equitable healthcare access at the core of the AMR response. AMR necessitates comprehensive strategies that involve patients actively in the fight against antibiotic resistance. Patient-centered approaches focus on educating individuals and incorporating them into the overall plan to combat AMR.[4]

Objectives:

- Transforming the AMR Narrative: Addressing AMR in human health involves shifting the narrative from a biological phenomenon to a people-centered approach, focusing on the needs and challenges of people and patients seeking health services for drug-resistant infections (“the AMR people journey”).[4]
- Empowering Policymakers: The objective is to empower policymakers in the human health sector at the national level by providing a core package of AMR interventions centered around people. This package serves as a guide for designing and prioritizing interventions, considering the challenges encountered throughout the AMR people journey.[4]

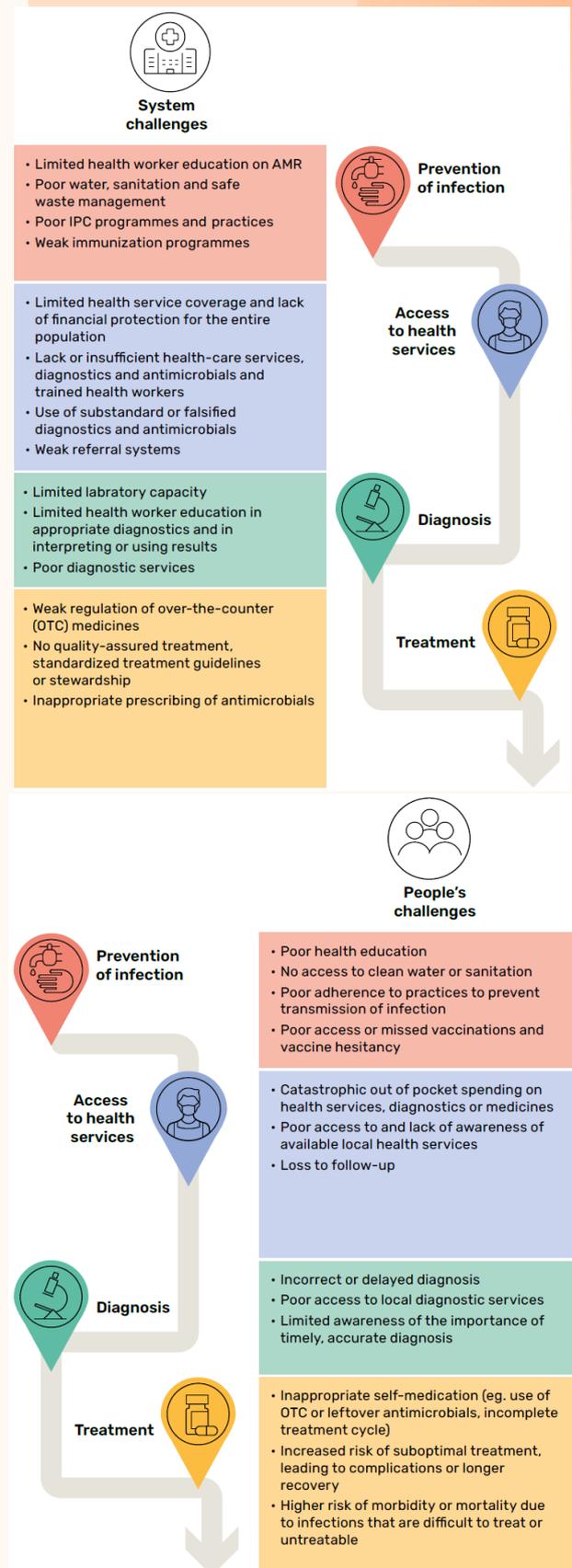


Figure 1: Challenges faced on the AMR people journey

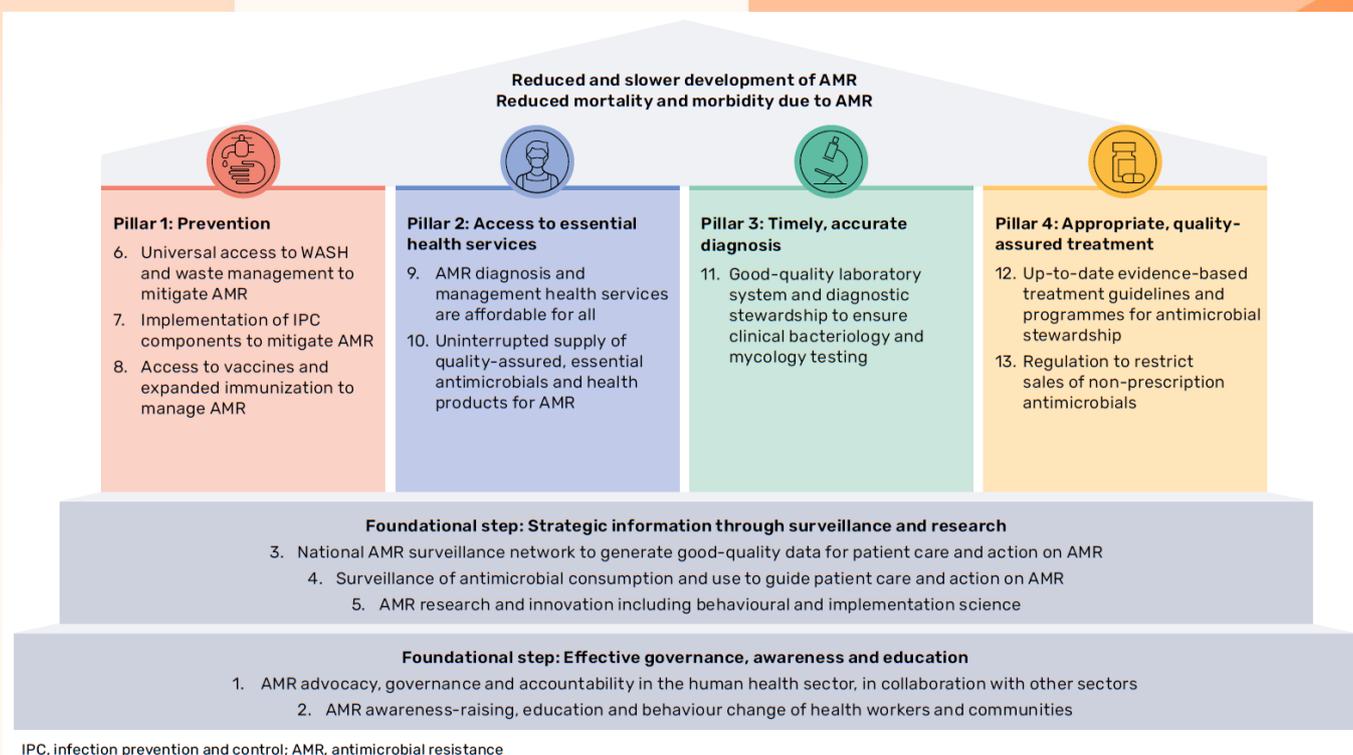


Figure 2: The people-centred core package of AMR interventions

In line with this, the World Health Organization (WHO) has crafted a fundamental package comprising 13 interventions.[4]

Drawing from tuberculosis experience, addressing challenges along the people and patient pathway is crucial for informed priority setting and effective investment. In applying this strategy to AMR, the emphasis should transition from the mere biological aspect of drug resistance to the health requirements and expectations of individuals and communities throughout the AMR people journey. Collaborative efforts at local, national, regional, and global levels are essential for the successful implementation of the people-centered AMR interventions in National Action Plans (NAPs), fostering sustainable integration into broader health system enhancements and pandemic preparedness. Placing people at the core of the AMR response is imperative to ensure inclusivity in the battle against bacterial infections and AMR.

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- [3] Thompson T. The staggering death toll of drug-resistant bacteria. *Nature*. 2022. doi: 10.1038/d41586-022-00228-x.

- [4] People-centred approach to addressing antimicrobial resistance in human health: WHO core package of interventions to support national action plans. Available from: <https://www.who.int/publications/i/item/9789240082496>. Last accessed on January 01, 2024

An approach to care that “consciously adopts individuals’, carers’, families’ and communities’ perspectives as participants in, and beneficiaries of, trusted health systems that respond to their needs and preferences in humane and holistic ways.” Such an approach “requires that people have the education and support they need to make decisions and participate in their own care”. For the AMR response, this includes not only engaging and empowering people and communities to be AMR champions and to promote responsible use of antimicrobials but also to prioritize people’s needs and values and ensure equitable access in the design and delivery of health care services from prevention to diagnosis, treatment and care of infections, including drug-resistant infections.

Dr. Amit M Shah
Associate Professor,
Department of Pharmacology

World Mental Health Day Celebration

On October 10, 2023, the Department of Psychiatry had organized a World Mental Health Celebration at the GMERS Medical College and General Hospital in Gandhinagar. The event, held at Lecture Hall, OPD building, commenced at 3 pm and welcomed participants from various institutes within the campus, including GMERS Medical College and General Hospital, NMH Bhavan, Nursing College, and Physiotherapy College. The program was inclusive, inviting faculties, resident doctors, students and nursing staff as well as other paramedics. With over 90 registrations, the turnout reflected a strong interest in mental health awareness. Dean, Dr. Shobhana Gupta, conveyed her blessings through a heartfelt message, while Medical Superintendent, Dr. Niyati Lakhani, delivered the inaugural speech, while the respected. The occasion marked a collaborative effort towards fostering mental well-being within the medical community.

marking it as a successful initiative in promoting mental health awareness and artistic expression.



The World Mental Health Celebration featured two engaging events. Dr. Chintan Solanki, Head of the Department of Psychiatry, delivered a compelling talk on the WHO theme "Mental health is a universal human right" and expounded on the crucial connection between physical exercise and maintaining both mental and physical health. The second event comprised an Elocution and Poetry Competition centered around the theme of Mental Health & Youth (માનસિક સ્વાસ્થ્ય અને યુવાનો). Over 20 participants, including medical and nursing students as well as faculty members, showcased their talents. Dr. Archana Kantak conducted the competition, and the prizes were awarded by Medical Superintendent Dr. Niyati Lakhani, RMO Dr. Pravinsingh Solanki, and Assistant RMO Dr. Sudha Sharma. The event received widespread appreciation,



As part of the World Mental Health Celebration, Dr. Chintan Solanki played a pivotal role beyond the college premises. On October 9, 2023, at the National Forensic Science University, he was invited as the chief guest for an expert talk in honor of World Mental Health Day. Addressing the audience, he passionately discussed mental health awareness, focusing on the WHO theme

"Mental health is a universal human right." The session proved highly interactive and garnered significant appreciation.



On October 11, 2023, Dr. Chintan Solanki was again invited, this time to the Manjushree Research Institute of Ayurvedic Science, Gandhinagar. There, he delivered a talk on "Awareness on mental health in general and

Depression & Suicide prevention in youth." The event received a positive response from over 200 ayurvedic students, fostering a meaningful interaction aimed at sensitizing them about mental health issues. Dr. Chintan Solanki's contributions beyond the confines of GMERS Medical College showcased the broader impact of the World Mental Health Celebration.



WORLD Mental Health DAY October 10

World mental health day is an important health awareness event witnessed every year on **10 October** to create awareness and promote the importance of mental health in one's life and society.



Orientation Program for Post-Graduate Medical Students

An Orientation Program for Post-Graduate Medical Students was held at GMERS Medical College on November 3, 2023. The newly admitted postgraduate course students of all broad specialties attended the program. A welcome speech and an overview of GMERS Medical College and General Hospital were given by Dr. Bela Padhiar (Professor and Head of the Department of Skin and VD). They were sensitized about various subjects like rules and regulations, rights, duties, and responsibilities of post-graduate resident doctors by Dr. Dinkar Goswami (Professor and Head of the Department of Medicine).

orientation was given by Dr. Darshan J. Dave (Professor and Head of the Department of Pharmacology). The students were educated about communication skills and time management by Dr. Gunjan Upadhyay (Professor and Head of the Respiratory Medicine). The technical aspects of biochemistry, microbiology, and pathology were explained by Dr. Kiran Chauhan (Professor and Head of the Department of Biochemistry); Dr. Meeta Parikh (Professor and Head of the Department of Pathology); Dr. Bhaskar Thakkar (Associate Professor, Department of Pathology); and Dr. Gaurishanker Shrimali (Professor and Head of the Department of Microbiology).



A brief introduction regarding post-graduation in medical field was given by Dr. Bipin Nayak (Professor and Head of the Department of Obstetrics and Gynecology). A brief talk on the Basic Course in Biomedical Research (BCBR), thesis, and research

Medicolegal issues in patient care were addressed by Dr. Shailesh Jhaveri (Professor and Head of the Department of Forensic Medicine and Toxicology). The students were told about stress management by Dr. Archana Katak (Assistant Professor, Department of Psychiatry), and a brief oration on anti-ragging policy was given by Dr. Mitul Mistry (Associate Professor, Department of Orthopaedics). Post-graduate students were oriented about respective departments through departmental visit in the afternoon session.



World AMR Awareness Week Celebration

Antimicrobial resistance (AMR) occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines, making infections difficult to treat and increasing the risk of disease spread, severe illness and death. As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective and infections become increasingly difficult or impossible to treat.

A global action plan to tackle the growing problem of antimicrobial resistance was endorsed at the 68th World Health Assembly in May 2015. One of the key objectives of the plan is to improve awareness and understanding of AMR through effective communication, education and training.

World AMR Awareness Week (WAAW) is a global campaign that is celebrated annually to improve awareness and understanding of AMR and encourage best practices among the public, "One Health" stakeholders and policymakers, who all play a critical role in reducing the further emergence and spread of AMR.

GMERS Medical College, Gandhinagar embraced the essence of the World Antimicrobial Awareness Campaign Week with a cascade of impactful events from November 21-23, 2023.

Poster/Pictorial Competition:

On November 21, the OPD building transformed into a canvas of insightful posters and pictorials from 3:00 PM to 5:00 PM, enlightened visitors on the significance of antimicrobial awareness.



AMR Awareness Campaign Rally:

November 22 saw an energetic rally echoing across the campus, uniting faculties, nursing, technical, and paramedical staff, along with the vibrant participation of the general public in the OPD and hospital areas, advocating for antimicrobial resistance awareness.



CME on Antimicrobial Resistance (AMR):

Culminating on November 23, a knowledge-rich Continuing Medical Education session on Antimicrobial Resistance (AMR) unfolded from 3:00 PM to 5:00 PM. Esteemed speakers from Medicine, Pediatrics, and Microbiology departments delivered enlightening lectures, delving deep into the nuances of AMR.



The GMERS Medical College Gandhinagar community came together in an inspiring display of commitment and enthusiasm, spreading awareness about the critical importance of combating antimicrobial resistance. Let's continue to champion this cause and strive for a healthier future!



Research Methodology Workshop for Post-Graduate Medical Students

Research Methodology Workshop was organized for the newly enrolled postgraduate medical students with the purpose to educate and guide them regarding the thesis topic selection and preparation of research proposal. It was organized on December 15-16, 2023 at the conference hall, Auditorium, GMERS Medical College and attached General Hospital, Gandhinagar.

Importance of ethics in clinical research; Informed consent process; Elements of research proposal & Citation of references.



This workshop was organized by Central Research Committee and Institutional Ethics Committee. All the newly enrolled 35 postgraduate students (MD/MS/DNB) had participated in this workshop. Both interactive lecture sessions as well as hands-on training experience were incorporated in this workshop.



Topics included were Clinical Research-Dissertation topic: Challenges & Opportunities; Formulation of research question, hypothesis and study objectives; Literature search and review; Study designs with Inclusion & Exclusion criteria; Sample size calculation;

The sessions were conducted by Dr. Jatin G. Buch (Chairperson of the Institutional Ethics Committee), Dr. Darshan J. Dave (Professor & Head in Pharmacology; Member secretary of CRC & IEC), Dr. Nilesh Thakor (Associate Professor in Community Medicine), Dr. Hina Gadani (Associate Professor in Anaesthesiology), Dr. Chintan Solanki (Associate Professor in Psychiatry) and

Dr. Apexa B. Shukla (Assistant Professor in Pharmacology), Dr. Kamallesh Bhatt, Dr. Riddhi Bhatt, Dr. Disha Mehta, Dr. Jay Vadsola and Dr. Sarthaki Bhavsar also contributed actively during hands-on training exercises.



The workshop not only facilitated theoretical comprehension but also provided practical insights into the challenges and nuances of conducting research in the dynamic field of medicine.



Compression-only Life Support (COLS) Training

The Department of Anaesthesia, GMERS Medical College, Gandhinagar orchestrated a monumental initiative by organizing the Compression-only Life Support (COLS) training program for approximately 4500 primary and secondary government school teachers. The profound impact of this endeavor was reflected in the distinguished presence of honorable State Ministers, Smt. Bhanuben Babariya and Shri Jasubhai Patel, who graced the occasion. Spearheading this crucial initiative were Dr. Shobhana Gupta, the Dean and Head of Anaesthesia, along with Dr. Bharti Rajani and Dr. Hina Gadani. The training program held, on two separate occasions, on December 3 and December 17, 2023, went beyond the conventional lecture format, incorporating a dynamic approach with a power point presentation followed by hands-on training sessions.



The program aimed to equip the teachers with the essential skills of Compression Only Life Support, emphasizing the importance of prompt and effective intervention during medical emergencies. The hands-on training sessions allowed the participants to practice the techniques under the guidance of experienced faculty members. This comprehensive training program not only contributed to the skill development of the teachers but also had broader implications for the community as a whole.



The success of the initiative was a testament to the exemplary teamwork exhibited by the anaesthesia

faculties, residents, interns, and the dedicated support staff from the Dean's office. Their collaborative efforts ensured the smooth execution of the program and its effectiveness in reaching a large number of school teachers. The commitment to community welfare and the proactive approach of the Department of Anaesthesia showcased its dedication to extending healthcare knowledge beyond the confines of the medical institution.



The COLS training program stands as a shining example of how educational institutions can actively engage with the community, empower educators with life-saving skills, and foster a culture of preparedness for medical emergencies. The Department of Anaesthesia's commitment to such initiatives underscores its role not only in the academic institution but as a catalyst for positive change within the broader societal context.

Join Hands to Say

On November 25, 2023, the Anatomy Department at GMERS Medical College in Gandhinagar orchestrated a unique and inventive event titled "Join Hands to Say." This event marked by enthusiastic participation from students, aimed to seamlessly blend creativity with educational outcomes. The thematic focus revolved around the intricate anatomy of the hand, fostering a harmonious connection between artistic expression and academic learning.



Students showcased their creative prowess by contributing to the event, employing a variety of mediums to depict the nuanced intricacies of hand anatomy. The competition served as a dynamic platform where participants not only exhibited their artistic talents but also deepened their understanding of the

subject matter. The fusion of creativity and academic exploration was a testament to the department's commitment to providing holistic learning experiences.

Following the competition, a prize distribution ceremony added an element of recognition and encouragement for the commendable efforts of the participants. The event not only celebrated artistic expression but also reinforced the significance of understanding anatomy, a fundamental aspect of medical education.



Beyond the artistic endeavors, "Join Hands to Say" played a pivotal role in nurturing a growth mindset among the students. By combining creativity with academic pursuits, participants were encouraged to approach learning with an open and evolving perspective. The event served as a reminder that education is not confined to textbooks and lectures but extends into the realm of imagination, innovation, and hands-on engagement.

Cadaver from Clues

On December 23, 2023, the Department of Anatomy orchestrated an engaging pedagogical event for students known as "Cadaver from Clues."



The event injected an element of excitement into the learning process by dividing students into three teams. Each team member randomly drew a clue chit containing information about a specific anatomical structure or clinical condition. The challenge unfolded as the remaining team members endeavored to identify the given topic within a concise two-minute timeframe by asking anatomically relevant questions.

This innovative activity not only added a layer of fun and competition but also served as a valuable platform for students to apply their theoretical knowledge in a practical and interactive setting. By encouraging students to think on their feet and employ anatomical reasoning, "Cadaver from Clues" fostered a dynamic learning environment that went beyond traditional teaching methods. The event exemplified the department's commitment to promoting active engagement and application of knowledge, creating a memorable and enriching educational experience for the participants.

Variability is the law of life, and as no two faces are the same, so no two bodies are alike, and no two individuals react alike and behave alike under the abnormal conditions which we know as disease.

– William Osler

Success Story from Pediatrics SNCU

“Life comes from physical survival; but the good life comes from what we care about. Survival can be summed up in three words – never give up.”

A baby of 26 years-old female was delivered at 37 weeks of gestation through LSCS at GMERS Medical College and General Hospital, Gandhinagar. The infant presented with moderate respiratory distress three hours after birth and was subsequently admitted to our Special Newborn Care Unit (SNCU). Bubble CPAP was initiated, and antibiotics were administered. On the second day of life, the baby developed pathological jaundice due to Rh incompatibility, and treatment involved the administration of intravenous immunoglobulin. Antibiotics were upgraded to address sepsis.

As the respiratory distress and septicemia persisted, the patient required mechanical ventilation for a duration of 13 days. Throughout the treatment, various blood products were transfused, and antibiotics were adjusted based on the blood culture reports. The patient was gradually weaned off the mechanical ventilator.

During the 35-day stay in SNCU, the patient encountered several complications, including ventilator-associated pneumonia and hypoxic convulsions. However, with early recognition and timely intervention, this complex case was successfully managed, leading to the patient's discharge.



Segmental Spinal Anaesthesia in Modified Radical Mastectomy

A 65-year-old female, known case of bronchiectasis with bilateral diffuse pulmonary crepitations and multiple ventricular premature contractions (VPCs), was scheduled for left radical mastectomy with axillary dissection. The surgical procedure was carried out successfully under thoracic segmental spinal anaesthesia, a contemporary approach gaining popularity in various anaesthesia practices. While the Department of Anaesthesia had previously employed segmental spinal anaesthesia for laparoscopic appendectomy, this marked the first instance of its application in a mastectomy with axillary dissection, skillfully executed by Dr. Hina Gadani, Dr. Richa Gupta, and their team.



Thoracic segmental spinal anaesthesia offers distinct advantages, especially in high-risk patients, as compared to general anaesthesia. Despite the patient's heightened anaesthesia risk profile, there were no intraoperative or postoperative anaesthetic complications observed. Dr. Nimesh Thakkar skillfully performed the mastectomy with minimal blood loss, demonstrating the efficacy and safety of thoracic segmental spinal anaesthesia in high-risk surgical interventions. This successful utilization of the technique further expands its potential applications, showcasing the department's commitment to adopting innovative practices for improved patient outcomes.

World Anaesthesia Day

16 OCTOBER

World Anaesthesia Day is a global healthcare event celebrated on the 16th of October every year to raise awareness about the importance of anaesthesia in medicine. This day also recognises the anaesthesia professionals, often known as anaesthesiologists, who help patients undergo surgery without experiencing any discomfort.



Left Radical Nephrectomy with Splenectomy for Large Renal Carcinoma

Renal cell carcinoma (RCC) represents a significant proportion of primary renal malignancies. Radical nephrectomy, the gold standard surgical treatment for localized RCC, involves the complete removal of the affected kidney, adjacent adrenal gland, and perinephric fat. This case report outlines the clinical scenario, surgical approach, and postoperative course of a patient with a sizable renal carcinoma undergoing radical nephrectomy at Department of Surgery, GMERS Medical College and General Hospital, Gandhinagar.

A 57-year-old male presented to the surgery OPD with a six-month history of intermittent left-sided flank pain and gross hematuria. Computed tomography (CT) imaging revealed a large, enhancing mass measuring 18 x 15 cm in the upper pole of the left kidney, suspicious for renal carcinoma staged as T3aN0M0.



The patient underwent comprehensive preoperative assessment, including laboratory investigations, cardiac evaluation, and pulmonary function tests. The patient underwent prophylactic vaccination to prevent post splenectomy complications of infections. The tumor's size, involvement of spleen, precarious vascularity of colon and age of the patient with compromised cardiac status were the main challenging issues.

Under general anesthesia, modified open book incision was kept. After meticulous dissection and careful adhesiolysis of the large colon preserving its vasculature, the renal artery and vein were identified and ligated. The entire kidney, along with involved spleen, the surrounding adipose tissue and adrenal

gland, was carefully removed. Intraoperative frozen section analysis confirmed clear margins.



The patient's postoperative recovery was uneventful. Immediate postoperative pain was managed with epidural analgesics, and the patient was gradually mobilized. With early enteral feeding and aggressive chest physiotherapy patient shifted to ward on day 2. Patient tolerated liquids and soft diet gradually. Patient was discharged on day 6. Histopathological examination of the specimen revealed clear cell renal carcinoma, staged as pT3aN0M0, with negative surgical margins. Patient is on follow up chemotherapy and disease free at present.

This case illustrates the successful management of a large renal carcinoma through radical nephrectomy. We are very thankful to the whole team, Dr. Mehul Patel (Oncosurgeon), department of anesthesia and all other who were involved in successful outcome directly or indirectly. The multidisciplinary approach, meticulous surgical technique, and comprehensive postoperative care contributed to favorable outcomes, emphasizing the importance of early diagnosis and prompt intervention in renal malignancies.

Academic Achievements



Dr. Hemakshee Patel, 2nd-year resident doctor in the Pathology Department at GMERS Medical College in Gandhinagar, achieved notable recognition at the 42nd annual conference of the Gujarat Association of Pathologists and Microbiologists (GAPM) in 2023 held in Vadodara. Dr. Patel's outstanding contribution earned her the prestigious 3rd prize in the poster presentation category.



The Dermatology Department has yet again proven its excellence, as DNB residents Dr. Nupur Warke and Dr. Pandharinath Khade secured the 1st prize in the state-level quiz at Cuticon 2k23 held in Junagarh from December 15-17, 2023. This competition witnessed enthusiastic participation from students across various medical colleges, making our department's victory particularly commendable. Their impressive performance has earned them the opportunity to represent Gujarat at the national level quiz in Dermacon 2k24, further highlighting their expertise in dermatology. Additionally, Dr. Pandharinath Khade showcased his knowledge and skills by presenting an award-winning paper at Cuticon 2k23. The achievements don't end there, as Dr. Radhika Agarwal emerged victorious in another quiz during the same event. These accolades not only reflect the high caliber of education and training within the Dermatology Department but also underscore its reputation for producing knowledgeable and skilled professionals in the field.



Dr. Sayan Kumar Das, a DNB resident doctor in the Department of Paediatrics, secured the 2nd Prize in the Award Paper Category of Oral Paper Presentation at the 29th East Zone National Pedicon. This prestigious event took place between December 1st and 3rd, 2023, at the International Fair Enclave in Agartala, Tripura. Dr. Das presented a compelling paper titled "Outcome of MDR Klebsiella Sepsis among Neonates admitted in NICU at a tertiary Care Centre of Western India- A Retrospective Study."



Publications

- ❖ Prajapati H, Bhatt K, Pathak J, Thacker V, Shah M, Dave DJ. A Drug Utilization Study in Patients Suffering from Gastro-Intestinal (G.I.) Cancer at a Tertiary Care Teaching Hospital. *Int J Pharm Clin Res.* 2023;15(12):564-569.
- ❖ Prajapati H, Pathak J, Bhatt K, Dave DJ, Shah M. A Drug Utilization Study in Patients Suffering from Breast Cancer at A Tertiary Care Teaching Hospital. *Int J Toxicol Pharmacol Res.* 2023;13(12):58-62.
- ❖ Patel R, Vadhadiya G, Gadani H, Gupta S. Comparative Evaluation of two different doses of Dexmedetomidine for intraoperative moderate sedation during spinal Anesthesia. *Archives of Anesthesiology and Critical Care.* 2023;9(supplement):488-494.
- ❖ Patel T, Shah U, Rajani B, Gupta S. A Comparative Study of The Efficacy of Intrathecal Injection of Hyperbaric Bupivacaine with Fentanyl Versus Hyperbaric Bupivacaine with Dexmedetomidine in Lower Abdominal Surgeries: A Prospective Randomized Study. *Archives of Anesthesiology and Critical Care.* 2023;9(Supp. 2):508-515.

mRNA vax: A pioneering research

A problem with injected mRNA was that it caused inflammatory reactions. To prevent this, the two scientists modified the mRNA's chemistry; this technology is used in Moderna and Pfizer's Covid vaccines

Unmodified mRNA

Uridine (U)

Inflammatory response

Base-modified mRNA

Pseudouridine (Ψ)

Inflammatory response

ABOUT THE SCIENTISTS

- Hungarian scientist Katalin Kariko, a former senior vice-president and head of RNA protein replacement at German biotech firm BioNTech, is a professor at the University of Szeged in Hungary and adjunct professor at the University of Pennsylvania
- Co-winner US scientist Drew Weissman is a professor in vaccine research also at Pennsylvania
- The two scientists will share the 11 mn-krona (\$1 million) award

DREW WEISSMAN

KATALIN KARIKO

Illustration: Mattias Karlén; source: nobelprize.org

The Nobel Prize in Physiology or Medicine 2023 was awarded jointly to **Katalin Karikó** and **Drew Weissman** "for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19". The discoveries by the two Nobel Laureates were critical for developing effective mRNA vaccines against Covid-19 during the pandemic that began in early 2020.

Truth about Yoga

Most people think yoga is a physical exercise that improves body flexibility. They are interested in fast-paced activities and find yoga slow-paced and uninteresting. They do not realize that fast-paced activities cause fatigue, exhaustion, and disturb the mind and body balance. Some people think yoga is the only alternative therapy that provides relief for headaches, arthritis, back pain, high blood pressure, diabetes, and other ailments. Such people attend yoga classes until their issues get fixed and discontinue their practice. Very few people are aware of the true benefits of yoga. Some people think yoga is a religious practice that deals with rituals. This is not true. Yoga is the basis of all religions. It educates the practitioner on self-understanding, love, selfless service, management of pain, and peaceful living.

What is Yoga????

- Yoga is a timeless tradition from Rig Veda with a history of over 5000 years.
- Yoga means uniting individual soul *Jeevatma* with universal soul *Parmatma*.
- Yoga controls the fluctuations of the mind.
- Yoga is an ancient philosophy that educates on health and harmonious living.
- Yoga is a science of self-awareness, self-development and self-transformation.
- Yoga is a holistic discipline that integrates body and mind, creates perfect balance.
- Yoga is not just physical exercise; it builds emotional stability and calm the mind.
- Yoga is a powerful health discipline that heals many health issues without medicine.
- Yoga is a way of life that boosts positive energies and improves quality of life.
- Yoga bestows self-understanding, love, knowledge, wisdom and happiness.
- Yoga awakens the spiritual self, makes the practitioner experience inner divinity.
- Yoga is a natural therapy that makes one look healthy, youthful and beautiful.
- Yoga is an amazing inward journey that illuminates life beyond pain and suffering.

When yoga practice starts in childhood, it is a great blessing for the children. Their systems will function well, posture and mental abilities will improve, there will be awareness of right and wrong, and children will develop positive thinking and emotional stability. Their

immune system will be strengthened and be free from disease. Yoga is for everyone. It is never too late to start yoga; one can start yoga even after attaining age sixty. Yoga is a gift for all ages and a boon for old age. It infuses vitality in old age, develops abilities to adapt to changing situations, builds confidence, and makes the extra years meaningful.

The only necessity is to learn yoga from a knowledgeable and experienced teacher who will understand the needs of the individual, provide proper guidance, and impart the right knowledge.

Viparita Karani

Benefits:

- Overcome physical and mental stress
- Relaxes the heart and mind
- Relieve the anxiety and depression
- Alleviates leg pain, knee pain, varicose veins, swelling in the legs and relieve fatigue
- Helps in thyroid problems, cervical spondylosis, hemorrhoids and reduce body excess weight

Cautions:

- Uncontrolled high BP.
- During menstruation and Pregnancy.

Duration: 10-30 mins

Procedure:

- Lie on the floor parallel to the wall with your Hip (buttocks) close to the wall.
- Slowly move your head away from the wall and take your legs up on the wall.
- During it, you one can do Uddyan Bandh or Mulbandh.
- Keep a mudra in your fingers and stay focused on your breath.



To come out, rest your hips on the floor, bend your knees and roll to a side. Breathe few times and sit.



Access to Diabetes Care

100 years after the discovery of insulin, millions of people with diabetes around the world cannot access the care they need. People with diabetes require ongoing care and support to manage their condition and avoid complications.

