

What's Up? @St John's Hospital

Issue 48, May 3rd, 2021



**World Autism
Awareness Day
2021**

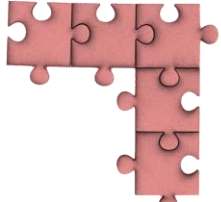
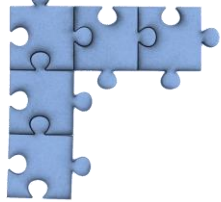
World Kidney day: 3rd year B.Sc. nursing students organized an education program on the theme *“Living well with Kidney Disease”*

EDITORIAL TEAM:

Archana S, Avinash. H. U, Bhavyank Contractor, Blessy Susan Biji, Deepak Kamath, Jennifer Gabriela, Jyothi Idiculla, Monica Rita Hendricks, Nivedita Kamath, Rakesh Ramesh, Ruchi Kanhere, Sanjiv Lewin, Santu Ghosh, Saudamini Nesargi, Sreenivasan N, Srilakshmi Adhyapak, Uma Maheshwari, Rev. Fr. Vimal Francis



St John's National Academy of Health Sciences
St John's Medical College Hospital, Bengaluru



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* We now present a fully interactive menu. It works best with Adobe reader application (on computers, mobile phones and tablets)





MESSAGE FROM THE EDITORIAL TEAM

Dear All!

We are pleased to release forty eighth issue of “What’s Up? @ St John’s Hospital” magazine today.

The second wave of the COVID in the country has taken a massive toll on the healthcare system. In St. John’s Medical College Hospital, as of 1st May 2021, 739 COVID patients were admitted with 155 patients in ITUs and ICUs with 51 patients on ventilators. The oxygen consumption has remained record high with 8194 CuM in 24 hours. To battle this humungous load on the system, workforce of entire hospital is being diverted to the COVID care. Over 145 HCPs have become positive in past few weeks. But remember **‘Tough times never Last’**, this too shall pass and become a history. Let us do our best by motivating ourselves and staying strong in these testing times. Let us not forget to follow strict guidelines to protect ourselves from COVID.

As of 1st May 2021, St. John’s has tested over 63,561 swabs, examined over 22,547 suspects in fever clinics, admitted over 5874, managed over 862 in ICUs on ventilators, delivered and provided obstetric care to over 1594 suspects, cared for over 435 neonates, dialysed over 1939 covid patients. 9654 patients were seen, stabilized, intubated, resuscitated and admitted/discharged as in the case may be from the Emergency department. With overall death rate of 7.8% and ICU ventilated death rate of 33.9%, St. John’s is doing an excellent world class job.

Meanwhile, the present issue is themed for World Autism Awareness day. The editorial board is truly thankful to all those who are contributing to the magazine with great enthusiasm. We request you to continue the same support and encourage us to move forward.

Please feel free to communicate with us to publish your achievements. Feedback on any section of the magazine is welcome. We are happy to evolve to meet the needs of our beloved readers. Happy Reading!!

Editorial Team

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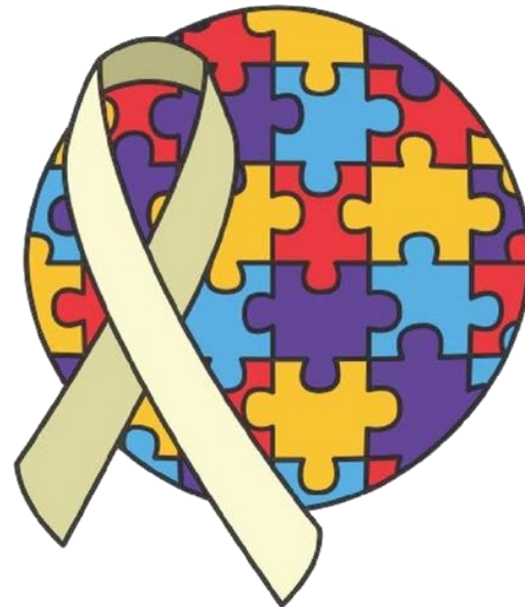


World Autism Awareness Day @ CAREADD

5th April 2021

The Centre for Advanced Research & Excellence in Autism and Developmental Disorders (CARE-ADD) is a multi-disciplinary research centre that aims to trace the biological underpinnings of Autism and related developmental disorders, while also exploring cost-effective interventions. The translational output includes the development of tools & technologies for early detection and

intervention for Autism and related developmental disorders; and the future plans are to develop scalable models of care for public health in the State. We also envisage developing nationwide research networks and training a wide variety of professionals.



In the year 2007, the UN declared April 2nd as the World Autism Awareness Day. On this day, member states of the UN hold autism awareness events to disseminate information about the rights of persons with autism. At CAREADD, we celebrated the Autism Awareness Day virtually, on 5th April 2021. The event began with Dr. Ashok MV, Head, CAREADD, introducing our centre, staff, services, and research, followed by a brief overview of the newly launched Autism Young Adult Services.

Dr. Sanjiv Lewin, Chief of Medical Services at St. John's Medical College Hospital was the chief guest for the event. He deliberated four important messages: a) Autism is not caused by bad parenting, but due to abnormal neural circuits, b) Remember to love the child in front of you though it is much more harder, c) There is no link between vaccines and autism, d) It is a measure of success of our societies when we look at how the society has looked after people with different abilities including autism and integrating them as valued members.

Acknowledgement: Dr. Sowmyashree
Mayur Kaku, CARE-ADD

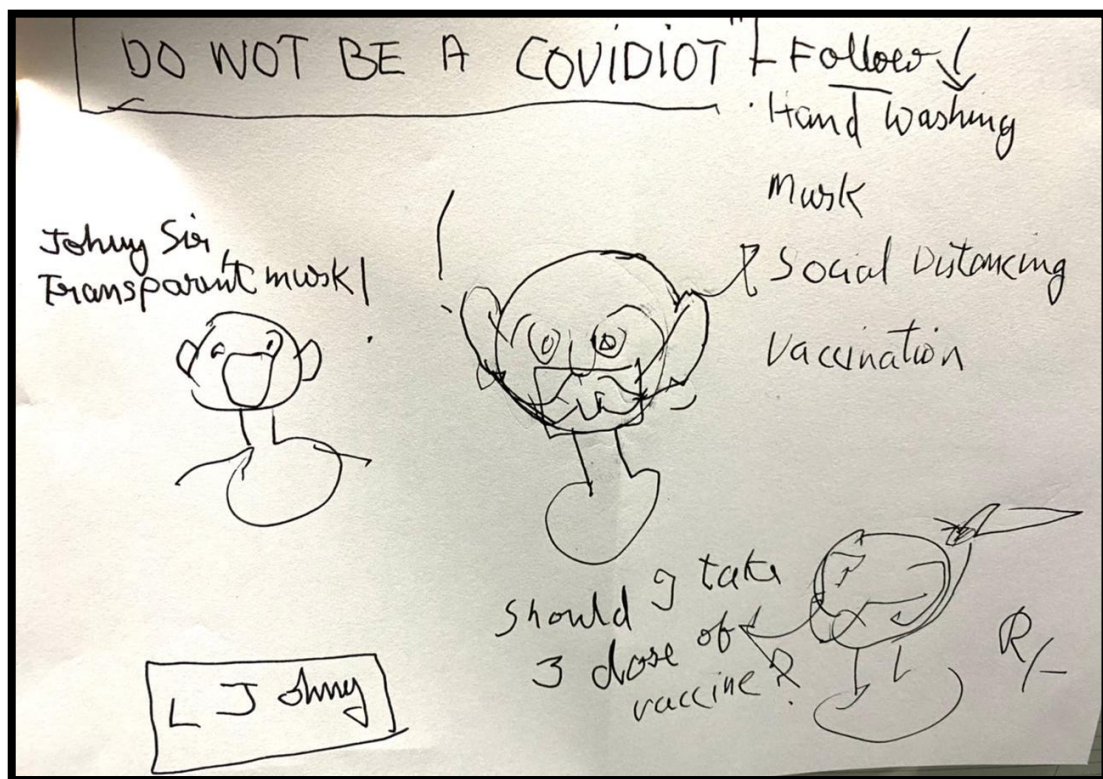
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20-year-old Ms. Sakeena Fiza spoke on “Sibling experience on growing up with autism” and said “I am the one who feels alone without him. He is my rock and inspiration. I have so much to learn from him”, bringing tears to all of our eyes. Dr. Shyam Rajagopalan then gave a talk on “Applying Computational Sciences in the neuroscience of autism”, emphasizing on the importance of technological advances in neurobiology research domains. Mr. Deevesh’s terrific tabla recital and a melodious piano musical rendered by Mr. Abhay, both on the autism spectrum, added charm to the awareness program and demonstrated the immense capabilities of this group. CAREADD had organized a) Autism Awareness Digital Poster competition and b) Autism Awareness Quiz, results of which were announced during the event.



L Johnny



Art by: Dr. Rakesh Ramesh

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St. John's Medical College Digital Autopsy Report

15th March 2021

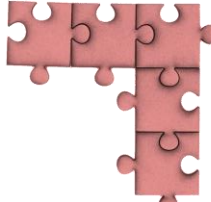
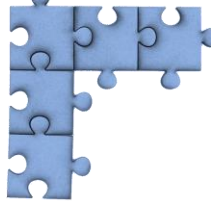


Medicolegal autopsies performed at our institution since 2001, have been rapidly increasing in numbers, with each passing year. In 2020, the department of Forensic Medicine performed 735 autopsies. All the autopsy reports are prepared in duplicate – the Original Report is given to the Investigating Officer and the Office Copy is retained indefinitely in the department. There is a huge collection of hard copy reports which is maintained in the department for safe keeping as per statutory requirement. However, this copy is prone to damage by water, fire, insects, pests and other time related factors. This led us to scout for a dependable, comprehensive system to store the autopsy reports electronically in a safe and secure manner, allowing for easy retrieval, for various purposes.

PalmPower India Handheld Applications Private Limited, designed and developed an app-based solution for this purpose which works on a 10 inch. Tablet. The post-mortem reports are directly entered onto the Tab based app. where the findings are either handwritten using a stylus or typed in on the keyboard, which is then converted to digital text. The reports are then saved on a server maintained in the Datacenter at the institution.



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In addition to the report, body diagrams, photographs of findings, scene of incident photographs, requisition for post-mortem from the investigating officer, relevant case records, histopathology examination report, chemical analysis report, microbiological report, etc. are also saved using this app.

We have been using this app since 25th November 2020, generating about 200+ reports, till date. We have been in talks with the creators of the app regarding ways of improving and customizing the product to best suit our needs. They have taken our input and swiftly modified the product to meet our requirements, thus making it easier to use. This solution was officially launched at the Institution on 15th March 2021 by the Director Rev. Dr. Paul Parathazham.

With the implementation of this product we are able to ensure large volumes of data are stored safely and can be assessed easily and securely. The post-mortem report is generated in a faster and more efficient manner, reducing the average time spent on preparing a report. The printed format makes the report more legible and neater, which has gained appreciation from the investigating officers, relatives of deceased, and in court of law. There is also the advantage of having a huge collection of data for future research, made available by the click of a button. We hope this product makes significant contribution to the standards of our post-mortem reporting and would prove to be a valuable tool in the upcoming days.

Acknowledgement: Mr. Herbert Albert,
General Manager IT.

GC Puraskar – Dr. Annie Thomas

27th March 2021 – Dr. Annie Thomas (Professor and Head, Department of Physiotherapy) was felicitated with Garden City (GC) Puraskar, by the School of Health Sciences at Garden City University, Bangalore for her exceptional contribution and dedication to the field of academics, clinics and research in physiotherapy.



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World Kidney day 2021

On account of World Kidney day the III year B.Sc. nursing students organized an education program on the theme **“Living well with Kidney Disease”** on 11th March 2021. The program was presented in the form of a video where interview of patients who underwent transplant and their quality of life was projected.

Dr. Prasanth Kedlaya (Prof and Head, Nephrology) was the chief guest. He inaugurated the event virtually in which he highlighted the importance of kidney transplantation. He also described how quality of life improves after transplant and the care that must be extended to these patients. He educated the public by providing several tips to prevent kidney disease. He stressed the importance of dialysis, its advantages and how it improves the quality of life among these patients. Dr. Anil Vasudevan (Prof and Head, Paediatric Nephrology) was also interviewed for the program and he briefed the public about the guidelines to be followed by the parent of a child diagnosed with kidney disease. An exhibition was organized and pamphlets were distributed to disseminate knowledge about kidney disease.



Acknowledgement: Dr. Reena Menon,
Principal, St. John's College of Nursing

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Health check-up and Malnutrition Assessment in Mugalur Anganawadi

19th March 2021



M. Sc. Nursing first Year students (2020 batch) of St.John's College of Nursing conducted health check-up and malnutrition assessment of under-five children on 19 March, 2021 for 30 participants in Mugalur Anganwadi. Health education was given to the mothers on worm infestation, accident prevention and management, personal hygiene, well balanced diet, followed by demonstration of hand hygiene. A return demonstration from the children on hand hygiene was also performed. A small animated video on personal hygiene was shown to children and mothers. Nutritional demonstration was done using Hyderabad mix, soyabean cutlets and green gram payasam. Mothers and children actively participated in the program and raised many queries that were clarified by the students.

Acknowledgement: Mrs. Reena Menon,
Principal, St. John's College of Nursing

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World Tuberculosis Day

24th March 2021

In view of the World Tuberculosis Day, on March 24th 2021, the 2nd year BSc nursing students did their part in educating the public attending the out-patient department. An exhibition and an educational video segment was displayed. Students clarified the doubts of the public as required. Rev. Fr. Pradeep Kumar Samad, ADH, Rev. Sr. Ria Immanuel, CNS and Rev. Sr. Prasada were present for the inauguration of the exhibition.



Acknowledgement: Mrs. Reena Menon,
Principal, St. John's College of Nursing

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COVID War Room

27th April 2021



The much needed COVID war room services were initiated in the 2nd floor conference hall foyer area. The objective of the war room is to improve and facilitate:

- Coordinated patient care
- Communication with Patients
- Communication between healthcare personnel involved in patient care
- Efficiency of lab and radiological Investigation
- Ease and efficiency of admission, billing and discharge processes

The war room has St. John's will have three major functions:

A. *Clinical care support and Discharge Summaries:* Dr. Chandramouli and team will provide and facilitate virtual patient management rounds for all COVID wards and support coordinated patient care. Senior faculty will be available 24x7 to provide support with clinical decision making. Also will provide counselling support in difficult situations. A team of PGs from the Pre & Para Clinical Departments will help with discharge summaries round the clock ensuring that they are accurate and written in time to facilitate early discharge of patients

B. *COVID Bed Enquiry and Support:* A team of senior nursing faculty will be available 24x7 to assist with Keeping track of bed occupancy / bed availability/ transfers to ITU and ICUs /discharges /insurance desk/ pharmacy support. This team will also connect with the appropriate departments to help troubleshoot “facilities” and logistic issues if any.

C. *Dedicated Billing Staff:* Mr Lawrence and team will be dedicated to COVID billing and will be available at this number for clarifications.

Thanks to Dr. John Stephen, Dr. Chandramouli, Dr. Suneetha Nithyanandam, Dr. Chaitanya Harita, Dr. Bindu Mathew, Dr. Reena Menon, CNS, ADH and ADF for being instrumental in initiation of war room.



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COVID VACCINE DOES NOT CAUSE Infertility

Since the last two months, there are messages, especially circulating on Facebook, that vaccines developed against the coronavirus strain responsible for the ongoing COVID19 pandemic cause fertility problems among men and women who are vaccinated. The messages are directed particularly against the m-RNA vaccines developed in the United States. This has led to the widespread anxieties, even in India, of COVID vaccines causing infertility.

FACT

Since this is an important issue to address and get the facts correct, we are quoting verbatim, publicly available information from the American Society for Reproductive Medicine that clarifies the above matter "As of January 9, 2021, there are no data about the impact of the COVID-19 vaccine on male or female fertility. For women, the American College of Obstetrics and Gynaecology (ACOG) recommends that pregnant and lactating women be offered the COVID-19 vaccine. Similarly, the Society for Maternal Foetal Medicine has recommended that pregnant women have access to the currently approved Pfizer COVID-19 vaccine. Finally, the American Society for Reproductive Medicine does not recommend withholding the vaccine from patients who are planning to conceive, and emphasizes that "patients undergoing fertility treatment and pregnant patients should be encouraged to receive vaccination based on eligibility criteria."

For men, the SMRU and SSMR recommend that:

- The COVID-19 vaccine should not be withheld from men desiring fertility who meet criteria for vaccination.
- COVID-19 vaccines should be offered to men desiring fertility, similar to men not desiring fertility, when they meet criteria for vaccination.

It should be noted that about 16% of men in the Pfizer/BioNtech COVID-19 vaccine clinical trial experienced fever after the second dose. Fevers can cause temporary declines in sperm production. Thus, if a man experiences fever as the result of the COVID-19 vaccine, he may experience a temporary decline in sperm production, but that would be similar to or less than if the individual experienced fever from developing COVID-19 or for other reasons."

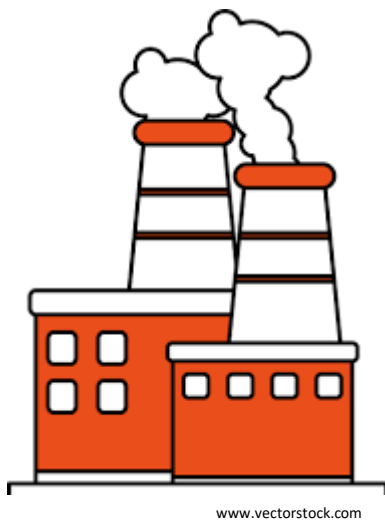




LAUGHTER IS THE BEST MEDICINE...



What did the bald man exclaim when he received a comb for a present?
Thanks! I'll never part with it

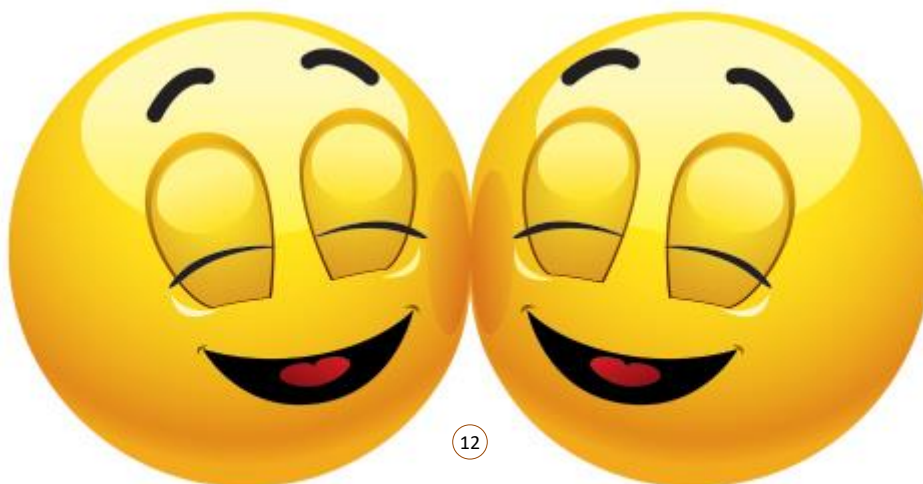


Where are average things manufactured?
The Satisfactory

Why cant your nose be 12 inches long?
Because, then it would be a foot



Knock knock...
Who's there?
Control freak
Con.....
Now you say " Control freak who?"





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Essential oil related seizures (EORS): A multi-center prospective study on essential oils and seizures in adults

Thomas Mathew, Saji K John, Vikram Kamath, Shiva Kumar R, Rakesh Jaday, Sreekanta Swamy, Gurucharan Adoor, Asha Shaji, Raghunandan Nadig, Sagar Badachi, Delon D Souza, Manjusha Therambil, G.R.K Sarma, Gareth J Parry

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Abstract

Objective: Essential oils (EOs) like eucalyptus and camphor have pro-convulsant properties. These EOs are present in many over-the-counter balms and oils. The effect of exposure to these EOs and occurrence of seizure is not systematically studied. The aim of this study was to evaluate the relationship between essential oils and the first episode of seizure and breakthrough seizures in known epileptic patients.

Methods: This was a multi-center prospective study, conducted in four hospitals over four years. Every person presenting with the first episode of seizure or breakthrough seizure was asked about exposure to EOs, mode of exposure, time to onset of a seizure in relationship to exposure, duration of seizure, type of seizure, and antiepileptic drug therapy.

Results: During the four-year period there were 55 patients with essential oil-related seizure (EORS). 22(40 %) had essential oil-induced seizures (EOIS) and 33(60 %) had essential oil-provoked seizures (EOPS). The female: male ratio was 1:1.1, the age of the patients ranged from 8 months to 77 years. In the EOIS group, 95 % had generalized tonic-clonic seizures and 5% had focal impaired awareness seizures. In the EOPS group, 42.4 % had focal impaired awareness seizures, 27.3 % generalized tonic-clonic seizures, 15 % focal to bilateral tonic-clonic seizures, and 15 % focal aware motor seizures. EOs implicated were preparations containing eucalyptus and camphor.

Conclusion: Exposure to essential oils of eucalyptus and camphor is an under-recognized cause of the first and breakthrough seizure. Identifying the true causative factor will prevent unnecessary antiepileptic drug therapy and future recurrence.

Epilepsy Res. 2021 Mar 26;173:106626. doi: 10.1016/j.eplepsyres.2021.106626.



The Association Between Ambient PM_{2.5} Exposure and Anemia Outcomes Among Children Under Five Years of Age in India

Unnati Mehtaa, Sagnik Deya, Sourangsu Chowdhurya, Santu Ghosh, Jaime E Hartb, Anura Kurpad

Centre for Atmospheric Sciences, Indian Institute of Technology Delhi, India; Harvard University T. H. Chan School of Public Health, Boston, USA; St. John's Medical College, Bengaluru, India; Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, USA

Abstract

Background: Anemia is highly prevalent in India, especially in children. Exposure to ambient fine particulate matter (PM_{2.5}) is a potential risk factor for anemia via systemic inflammation. Using health data from the National Family and Health Survey 2015–2016, we examined the association between ambient PM_{2.5} exposure and anemia in children under five across India through district-level ecological and individual-level analyses.

Methods: The ecological analysis assessed average hemoglobin levels and anemia prevalence (hemoglobin < 11 g/dL considered anemic) by district using multiple linear regression models. The individual-level analysis assessed average individual hemoglobin level and anemia status (yes/no) using generalized linear mixed models to account for clustering by district. Ambient PM_{2.5} exposure data were derived from the Multiangle Imaging spectroRadiometer (MISR) level 2 aerosol optical depth (AOD) data and averaged from birth date to date of interview.

Results: The district-level ecological analysis found that, for every 10 µg m⁻³ increase in ambient PM_{2.5} exposure, average anemia prevalence increased by 1.90% (95% CI = 1.43, 2.36) and average hemoglobin decreased by 0.07 g/dL (95% CI = 0.09, 0.05). At the individual level, for every 10 µg m⁻³ increase in ambient PM_{2.5} exposure, average hemoglobin decreased by 0.14 g/dL (95% CI = 0.12, 0.16). The odds ratio associated with a 10-µg m⁻³ increase in ambient PM_{2.5} exposure was 1.09 (95% CI = 1.06, 1.11). There was evidence of effect modification by wealth index, maternal anemia status, and child BMI.

Conclusion: Our results suggest that ambient PM_{2.5} exposure could be linked to anemia in Indian children, although additional research on the underlying biologic mechanisms is needed. Future studies on this association should specifically consider interactions with dietary iron deficiency, maternal anemia status, and child BMI.

Environ Epidemiol. 2021 Jan 7;5(1):e125. doi: 10.1097/EE9.000000000000125.



PEARLS OF WISDOM

Your life is your story, go write it.

- Clare



©Tiny Buddha



©theharrisonnetwork

Fortune favors the bold.

- Virgil

Kindness is difficult to give away because it keeps coming back.

- Marcel Proust



© Pinterest

REF: 365 Days of Wonder: R.J.Palacio.

Did You Know?

Some ants make themselves explode when they're attacked. The latest addition to the exploding ant species are the *Colobopsis explodens*, ants that kill themselves to protect their colony by splitting their skin open and coating their enemies in a yellow goo that either kills the intruder or hinders its attack. These self-sacrificing ants are nothing more than the minor workers of the colony or better known as "the expendables." (Ref: Readers Digest)



© Readers Digest

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GREY *Matters!*



**WHAT IS IN A PLACE?
GEOGRAPHY IN MEDICINE!**

1. My name originates in Holland although I can be present in anyone's blood across the world and cause thrombosis. Who am I?
2. I originated in China but am named after its illustrious neighbour. I can confer a 'divine' halo around the crypto bug. Who am I?
3. I am bitter and used in baths and to treat stomach upset. I am named after the place where I was discovered. Who am I?
4. I am the brainchild of a doctor and an artisan and help many people 'limp back' to normalcy. Who am I?
5. I was born in Germany and named after one of its equatorial colonies. I can cause cancer but can colour abnormal fibrils apple green too! Who am I?



[CLICK HERE FOR ANSWERS](#)

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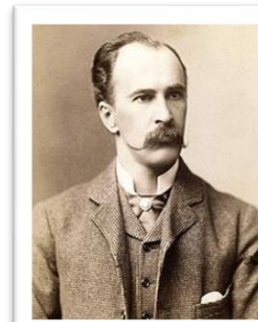
THE QUOTABLE OSLER

Your own frailties make you considerate of others.

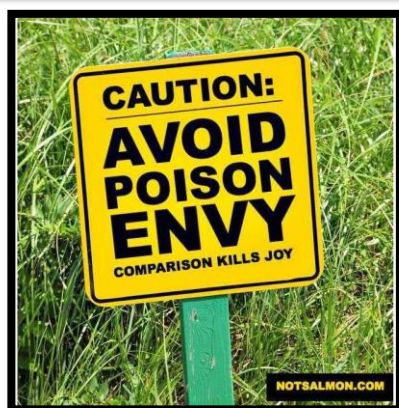
Keep a looking glass in your own heart, and the more carefully you scan your own frailties, the more tender you are for those of your fellow creatures.



© Phys.org



SIR WILLIAM OSLER



© Farnam street

Avoid envy, be generous.

Envy, that pain of the soul, as plato calls it, should never for a moment afflict a man of generous instincts who has a sane outlook in life.

REF: The Quotable OSLER: Edited by Mark E Silverman, T. Jock Murray, Charles. S Bryan



MEDICINE THIS MONTH

A Bird's Eye View.....

Adjuvant Nivolumab in Resected Esophageal or Gastroesophageal Junction (E-EGJ) Cancer.

Patients with localized E-EGJ cancer treated with neoadjuvant chemoradiotherapy (CRT) and had residual disease at the time of resection remain at high risk for recurrence and death from cancer. CheckMate 577 trial on 800 patients, adjuvant nivolumab for up to one year doubled median DFS compared to placebo (22.4 versus 11 months). Benefits were seen across all patient subgroups & didn't depend on programmed cell death ligand-1 status. One year of adjuvant nivolumab can be offered to E-EGJ cancer patients who have residual disease in the surgical specimen after initial CRT.

- Kelly Et al. NEJM 2021

Ensuring Exclusive Human Milk diet for babies in COVID 19 times.

The COVID-19 pandemic has ramifications for the delivery of newborn nutrition & care. WHO recommends continuation of breastfeeding in these difficult times, with due precautions. If direct breastfeeding is not possible, milk expression should be explored. Pasteurized donor human milk from milk banks may be fed if mother's own milk is not available. To universalize access to human milk, the Indian government has proposed the establishment of comprehensive lactation management centers/milk banks, lactation management units, and lactation support units at all levels of the public health system. Due to COVID-19, these centers are encountering additional challenges cutting across interventions of rooming in, breastfeeding, milk expression, and provision of donor milk & kangaroo mother care.

- Sachdeva et al. IP 2020



Clinical Trial N Engl J Med. 2021 Apr 1;384(13):1191-1203. doi: 10.1056/NEJMoa2032125.

Adjuvant Nivolumab in Resected Esophageal or Gastroesophageal Junction Cancer

Ronan J Kelly¹, Jaffer A Ajani¹, Jaroslaw Kuzdzal¹, Thomas Zander¹, Eric Van Cutsem¹, Guillaume Piessen¹, Guillermo Mendez¹, Josephine Feliciano¹, Satoru Motoyama¹, Astrid Lièvre¹, Hope Uronis¹, Elena Elimova¹, Cecile Grootscholten¹, Karen Geboes¹, Syed Zafar¹, Stephanie Snow¹, Andrew H Ko¹, Kynan Feeney¹, Michael Schenker¹, Piotr Kocon¹, Jenny Zhang¹, Lili Zhu¹, Ming Lei¹, Prianka Singh¹, Kaoru Kondo¹, James M Cleary¹, Markus Moehler¹, CheckMate 577 Investigators

Collaborators, Affiliations

PMID: 33789008 DOI: [10.1056/NEJMoa2032125](https://doi.org/10.1056/NEJMoa2032125)

Abstract

Background: No adjuvant treatment has been established for patients who remain at high risk for recurrence after neoadjuvant chemoradiotherapy and surgery for esophageal or gastroesophageal junction cancer.

Methods: We conducted CheckMate 577, a global, randomized, double-blind, placebo-controlled phase 3 trial to evaluate a checkpoint inhibitor as adjuvant therapy in patients with esophageal or gastroesophageal junction cancer. Adults with resected (R0) stage II or III esophageal or gastroesophageal junction cancer who had received neoadjuvant chemoradiotherapy and had residual pathological disease were randomly assigned in a 2:1 ratio to receive nivolumab (at a dose of 240 mg every 2 weeks for 16 weeks, followed by nivolumab at a dose of 480 mg every 4 weeks) or matching placebo. The maximum duration of the trial intervention period was 1 year. The primary end point was disease-free survival.

Results: The median follow-up was 24.4 months. Among the 532 patients who received nivolumab, the median disease-free survival was 22.4 months (95% confidence interval [CI], 16.6 to 34.0), as compared with 11.0 months (95% CI, 8.3 to 14.3) among the 262 patients who received placebo (hazard ratio for disease recurrence or death, 0.69; 96.4% CI, 0.56 to 0.86; P<0.001). Disease-free survival favored nivolumab across multiple prespecified subgroups. Grade 3 or 4 adverse events that were considered by the investigators to be related to the active drug or placebo occurred in 71 of 532 patients (13%) in the nivolumab group and 15 of 260 patients (6%) in the placebo group. The trial regimen was discontinued because of adverse events related to the active drug or placebo in 9% of the patients in the nivolumab group and 3% of those in the placebo group.

Conclusions: Among patients with resected esophageal or gastroesophageal junction cancer who had received neoadjuvant chemoradiotherapy, disease-free survival was significantly longer among those who received nivolumab adjuvant therapy than among those who received placebo. (Funded by Bristol Myers Squibb and Ono Pharmaceutical; CheckMate 577 ClinicalTrials.gov number, [NCT02743494](https://clinicaltrials.gov/ct2/show/study/NCT02743494).)

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Ensuring Exclusive Human Milk Diet for All Babies in COVID-19 Times

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From ¹Maternal, Newborn, Child Health and Nutrition, PATH, New Delhi; ²Department of Neonatology, Government Medical College and Hospital, Chandigarh; ³Department of Neonatology, Institute of Post-Graduate Medical Education and Research and Seth Sukhlal Karnani Memorial Hospital, Kolkata, West Bengal; and ⁴Department of Neonatology, District Hospital Chittorgarh, Rajasthan; India.

Correspondence to: Ruchika Chugh Sachdeva, Deputy Director, Maternal, Newborn, Child Health and Nutrition, PATH 15th Floor, Gopal Das Bhawan, Barakhamba Road New Delhi- 110001, India. rsachdeva@path.org

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The coronavirus disease (COVID-19) pandemic has ramifications for the delivery of newborn nutrition and care services. World Health Organization recommends continuation of breastfeeding in these difficult times, with due precautions. If direct breastfeeding is not possible, milk expression should be explored. Pasteurized donor human milk from milk banks may be fed if mother's own milk is not available. To universalize access to human milk, the Indian government has proposed the establishment of comprehensive lactation management centers/milk banks, lactation management units, and lactation support units at all levels of the public health system. Due to COVID-19, these centers are encountering additional challenges cutting across interventions of rooming in, breastfeeding, milk expression, and provision of donor milk and kangaroo mother care. We discuss issues faced and alleviation measures taken by these centres in relation to provision of an exclusive human milk diet for infants during the pandemic.

Keywords: Breastfeeding, Donor Human Milk, Kangaroo Mother Care, Pandemic.

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The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has brought forth unprecedented global and local challenges, more so in developing countries like India. While on one hand, the country has launched measures including a nationwide lockdown to curb the spread of the disease, on the other, efforts are on to minimize disruptions to the delivery of essential services such as maternal and newborn health and nutrition [1]. Estimates suggest that lower coverage of interventions for six months due to the pandemic will result in 17% (1.15 million) more newborn and child deaths globally [2].

Breastfeeding and a human milk diet has a key role in preventing life-threatening infections in infants during the COVID-19 pandemic thus reducing the stress on the health system. Considering that, India has a high newborn mortality rate and a third of all preterm births, in the world [3], ensuring adequate availability of breastmilk becomes even more pertinent. Of the 25 million births, nearly 43% (11 Million) are not breastfed within the first hour [4] and nearly 30-50% preterm/sick babies in neonatal intensive care units (NICU) in India lack access to breastmilk [5].

INFANT FEEDING AND COVID-19

So far, SARS-CoV-2 has not been detected in the breastmilk of mothers with COVID-19 [6]. Preliminary

data indicates a strong immunoglobulin A dominant SARS-CoV-2 immune response in breast milk of COVID-19 infected mothers [7]. In February 2020, the World Health Organization (WHO) advised early and exclusive breastfeeding for COVID-19 suspected and confirmed mothers, while encouraging them to take adequate precautions. Mothers who are too ill to breastfeed are advised to feed their expressed breastmilk [8]. Guidelines by Indian Council of Medical Research (ICMR) and other professional bodies propagate similar advice [9-11].

In absence of the above, pasteurized donor human milk (PDHM) from a human milk bank (HMB) is recommended over formula milk. Once mothers recover, they should be supported for relactation [8,11]. PDHM compared to formula milk reduces the risk of sepsis, necrotizing enterocolitis, diarrhea and feeding intolerance, and the length of stay in NICU [12]. Feeding supplementary PDHM is associated with increased exclusive breastfeeding at six months of life [13].

As per the National Guidelines for Lactation Management in Public Health Facilities [14], it is proposed to establish facility-based lactation management centers at all levels of the public health system. Comprehensive lactation management centers (CLMCs) or integrated milk banks at tertiary centers, lactation management units at secondary centers, and



RESEARCH SNIPPETS

Plausibility vs Probability

The use of probability theory to assess the risk of undergoing a "cardio-vascular event" for example would mean that the event takes place as a "all or nothing" phenomenon, while it is generally not. An "all or nothing" phenomenon implies that the condition of the subject exposed to the risk of the event does not change in relation to the actual occurrence of the event. For example, if the event consists in being hit by a tile falling from a roof whilst walking along a street, we wouldn't expect particular transition phases preceding the unfortunate event, at least at the level of the victim of the event.

In clinical settings on the contrary, very often, even if the event takes place suddenly, resembling a falling tile, it can be considered as the natural final outcome of an unstable and evolving condition which predisposes by its nature the subject to the event.

In order to better explain this concept we can consider the case of a cerebro-vascular event in relation to the presence of a carotid stenosis. We know that local lesion parameters (morphology, degree of stenosis), hemodynamic factors (collateral compensation) and systemic factors (clinical symptoms, accompanying diseases, risk factor control) have been taken into account to develop a model able to determine the likelihood of the occurrence of an event. To simplify the reasoning, we can assume that it is just the degree of stenosis which actually influences and ultimately determines the development of the event.

For example, when the degree of stenosis reaches and exceeds a definite level, suppose $> 90\%$ of the vessel lumen, then the occurrence of the event becomes almost unavoidable. Following this reasoning, a patient with 70% stenosis, while being perfectly asymptomatic has a probability of having an event, within a certain time-frame, of 80% , while for a patient with 50% stenosis the same value could decrease to 30% .

The patient in this example would make a transition along different degrees of event "plausibility", by evolving with their asymptomatic carotid disease, while the subject walking along the street would remain continuously in a "all or nothing" situation.

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RESEARCH SNIPPETS

Plausibility vs Probability contd.

In the latter case one would use the frequency of being hit on the head by a falling tile in a general population to describe the risk to which this subject is exposed, for example 1: 100.000, while in the other case a better definition would be the membership degree of the patient to the typical condition predisposing to the event, a concept which is described more clearly using fuzzy logic, a special multivalent logic, rather than binary logic.

As it is known, standard logic applies only to concepts that are completely true (having degree of truth 1.0) or completely false (having degree of truth 0.0), deriving directly from Aristotelian law of the "excluded middle". Traditionally, logical calculi are bivalent that is, there are only two possible truth values for any proposition, true and false (which generally correspond to our intuitive notions of truth and falsity).

But bivalence is only one possible range of truth values that may be assigned, and other logical systems have been developed with variations on bivalence, or with more than two possible truth-value assignments. In the classical bivalence scheme, true and false are determinate values: a proposition is either true or false (exclusively), and if the proposition does not have one of those values, by definition it must have the other. This is the justification for the Law of excluded middle: $P \vee \neg P$ (i.e., either the proposition or its negation holds). Fuzzy logic is a generalization of standard logic, in which a concept can possess a degree of truth anywhere between 0.0 and 1.0.

REFERENCE: Grossi E. Medical concepts related to individual risk are better explained with "plausibility" rather than "probability". *BMC Cardiovasc Disord.* 2005;5:31. Published 2005 Sep 27. doi:10.1186/1471-2261-5-31

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GREY Matters!



**What is in a place- geography in
medicine!
ANSWERS**

1. Factor V **Leiden**, name after the place Leiden in Holland
2. **India** Ink stain, which confers a halo around cryptococcus as its polysaccharide capsule is left unstained.
3. '**Epsom**' salt [Magnesium sulphate], named after Epsom in Surrey, England.
4. **Jaipur** Foot
5. **Congo** Red stain, initially used as a cloth dye and later in labs- amyloid fibrils exhibit an apple green birefringence when stained with Congo Red.



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