

What's Zip? @St John's Hospital

Issue 46, March 1st, 2021



International
Childhood
Cancer
Awareness day
15/02/2021

The Tree of Life – a universal symbol of growth and renewal shows that many stakeholders are required to work together and many hands are required to cure children with cancer. Art done together on the occasion of International Childhood Cancer Day 2021

EDITORIAL TEAM:

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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 the forty sixth issue of “What’s Up? @ St John’s Hospital” magazine today.

The present issue is themed ‘Golden yellow’ to commemorate the International Childhood Cancer day. We thank Dr. Anand Prakash (Associate Professor, Department of Pediatrics, Division of Pediatric hematology and oncology) for providing us a brief report on the day.

It also brings us a great pleasure to highlight two significant innovations by the Departments of Physiology and Nutrition, namely, non-invasive method to measure the body composition by using an indigenously made high tech gamma ray counter and a Novel St. John’s technique of measuring the Vitamin B12. We congratulate and thank Dr. Anura V Kurpad (Professor, Department of Physiology) and Dr. Rebecca Kurian (Professor, Division of Nutrition) for providing us a overview of these accomplishments by their team work.

The present issue brings you the details of Insurance department in the section of ‘Know your hospital’. Also not to miss the busted fake news on Cowin app in the section of ‘St. John’s Watch Dog’.

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



International Childhood Cancer Day 2021

15th February 2021

- Clera Lewis, MSW, SJMCH

International Childhood Cancer Day (ICCD) is celebrated on 15th February every year to extend our support and solidarity towards children and adolescents with cancer, the survivors, and their family members.

Children with cancer face many challenges to access and complete treatment. While more than 70-80% of all childhood cancer is curable, there are many barriers to cure especially in developing countries. Late referral is common. Persistent fever, lymphadenopathy or bleeding, the common presenting signs of leukemia (blood cancer) are often treated as infections in the community. A general pediatrician may consider the diagnosis of cancer relatively late in the course of the disease. Some cancers especially brain tumors are often missed in the community. While this is the second most common tumour among children in the developed world, brain tumors are often not diagnosed on time in developing countries.

To get the best outcome of the treatment of Pediatric Cancer requires many types of expertise including Pediatric Nursing, Pediatric Surgery, Radiotherapy, Neurosurgery, Pediatric Intensive Care, Orthopedics, Transfusion medicine services, Palliative care, Nutrition and Social work. We at St John's are in a unique position to provide the best possible care for children with cancer. Some children with difficult to cure cancers and relapsed cancers can be cured with stem cell transplantation, which is now being performed regularly at St John's.

The Pediatrics Hemato-Oncology Division celebrated International Childhood Cancer Day in our hospital on 15th February 2021. The programme started at 2.00 pm by welcoming all children with cancer and their parents. The team comprised of doctors, nurses, ward clerks, social workers, nutritionists and MSW interns/volunteers all who closely work among children diagnosed with cancer. Ms Kalavathi (Inner Wheel Club), one of the donors, addressed the gathering. Twenty-four children with cancer and their families actively participated for the celebration. The programme was concluded by giving gifts to all the children followed by snacks.

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ICCD 2021 contd..

As part of the celebration a hand paint tree model was made by the children which is the symbol of ICCD. The Tree of Life – a universal symbol of growth and renewal shows that many stakeholders are required to work together and many hands are required to cure children with cancer.



Emergency Therapeutic Leukapheresis in Pediatric Intensive care – a life saving procedure

Division of Pediatric Oncology, Hematology and Stem Cell transplantation

28th January 2021

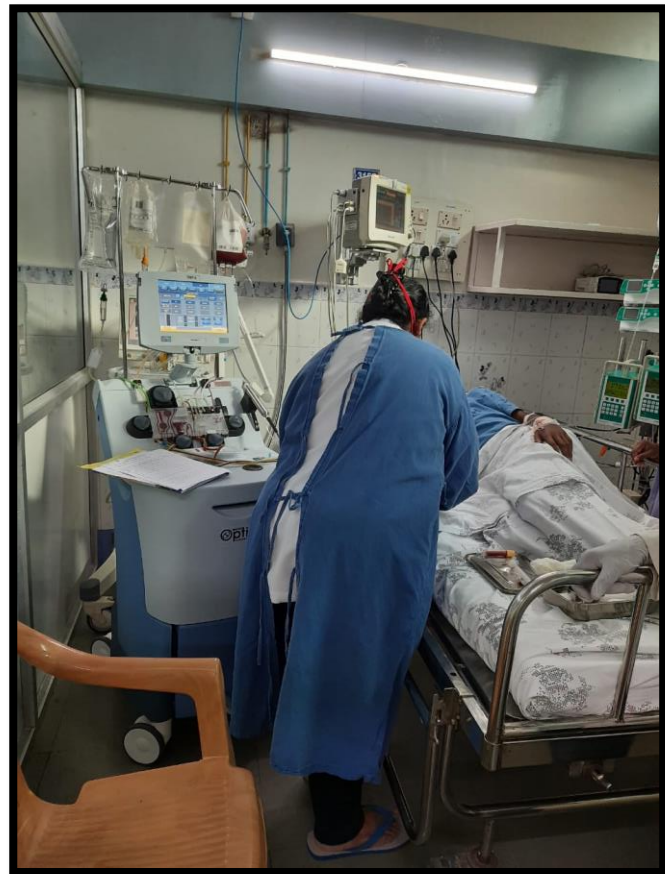
Therapeutic leukapheresis is now available at St John's. Leukapheresis is an emergency procedure performed in patients with extremely high white cell counts caused by leukemia (blood cancer). Patients with leukaemia may present with complications of the high white cell count leading to intracranial bleed or stroke, respiratory distress (pulmonary leucocytosis), acute renal failure and even death. While chemotherapy reduces the high white cell counts gradually, leukapheresis helps in rapidly reducing white cell counts in patients with leukemia presenting with particularly high white cell counts or complications of the high white cell count.

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Leukapheresis contd...

A 15 year old boy presented to Paediatric Oncology with progressive drowsiness and giddiness for a period of two weeks. Blood count evaluation confirmed high white cell count of 8 lakhs (Normal 4-11000). Haematological evaluation confirmed the diagnosis of Chronic myeloid leukaemia (CML). As brain imaging showed significant raised intracranial tension with bleeds secondary to the high count he was cared for in the Paediatric ICU. An urgent partial exchange transfusion was done overnight by the PICU team.



A bedside leukapheresis was performed with the **recently acquired stem cell apheresis unit** by the Department of Immunohematology and Transfusion medicine. The child tolerated the procedure well. His sensorium improved rapidly with decreased in blood counts. CML therapy was continued and he responded well and was discharged home in 3 weeks.

The introduction of therapeutic leukapheresis done emergently in the ICU is an important new therapy now available at St John's. A big 'thank you' to the Departments of Immunohematology & Transfusion Medicine and the PICU teams for the rapid response which saved this child's life.

Acknowledgement: Dr. Anand Prakash, Associate Professor, Division of Pediatric Oncology, Hematology and Stem Cell Transplantation

Pulse Polio Program 2021

31st January to 3rd February 2021

INTRODUCTION:

The Pulse Polio initiative vaccinates all the Under 5 children in the nation at the same time, ensuring eradication of Polio. Every year, the Undergraduate students of St. John's Medical College volunteer for this programme by assisting the Bruhat Bengaluru Mahanagar Palike in the field activities of Pulse Polio initiative. Amidst the COVID 19 pandemic and the COVID 19 Vaccination programme for Health care workers during January 2021, the implementation of Pulse Polio 2021 was done from 31st January 2021 to 03rd February 2021.

PLANNING AND TRAINING OF UNDERGRADUATE STUDENTS ON THE PULSE POLIO ACTIVITIES:

The Department of St. John's Medical College worked with the Urban Health Centre, Madiwala and identified 13 booths across Venkatapura, Jakkasandra area for the undergraduate students to volunteer for the Pulse Polio Programme. With support from Adegodi Urban Health Centre a Pulse Polio booth was set up at the St. John's Medical College Hospital on all the four days of the programme.



Training of 2017 batch students on Pulse Polio activities at St. John's Medical College

The training of 2017 batch Undergraduate Medical students on the activities of the programme was conducted by faculty from the Department of Community Health, St. John's Medical College and health workers of the Madiwala Urban Health Centre on the following important aspects

- Importance of Pulse polio vaccination
- Eradication status of polio worldwide
- Cold Chain maintenance and vaccination principles
- COVID prevention
- AFP, Measles and ILI surveillance as a part of the Pulse Polio

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Pulse Polio Program 2021 contd...

BOOTH BASED AND HOUSE TO HOUSE ACTIVITIES OF THE PULSE POLIO:

31.01.2021 (Booth Based activity): A total of 60 students were involved in vaccinating 3262 children across 13 booths and 2 transit booths.

01.02.2021 to 03.02.2021 (House to House vaccination activity): A total of 90 students were involved in the House to House vaccination of 4190 children across Venkatapura and Jakkasandra area.



Vaccination by students at a booth

Acknowledgement for write up: Dr. Ramakrishna Goud,
Professor and Head, Department of Community Medicine

PARTICIPATION OF COLLEGE OF NURSING IN PULSE POLIO PROGRAM

235 students participated in the National pulse polio programme from 31st Jan to 3rd Feb 2021. The PHC's covered were Koramangala PHC, Aduodi Dispensary, Aduodi maternity Home, Thavarekere PHC & Madiwala PHC. A total of 9,541 children under these five PHC's received the polio vaccine.



Following the event all 235 students were screened for RTPCR within a week as a precautionary measure by the BBMP.

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

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CONGRATULATIONS!

2020-2021

THE BEST TEACHERS OF THE YEAR

The Pioneer's Award for Excellence in Teaching for the year 2020-2021

Towards the end of their Internship, the outgoing Interns batch (Batch of 2015 this time) nominate using a scoring system their teachers from among all teachers in pre, para and clinical departments. The best is awarded 'The Pioneer's Award for Excellence in Teaching', instituted by Dr George Varghese - the batch of 1963, on Graduation Day.

Overall Rankings

I.	Dr Chaitanya H Balakrishnan	General Medicine
II.	Dr Nachiket Shankar	Anatomy
III.	Dr Sridar Govindaraj	General Surgery
IV.	Dr Anil Kumar S	General Medicine
V.	Dr Mario Vaz	Physiology
VI.	Dr Aravind Kasthuri	Community Medicine
VII.	Dr Chandramouli	General Medicine
VIII.	Dr Suneetha Nithyanandam	Ophthalmology
IX.	Dr Anand Prakash	Paediatrics
X.	Dr Anthony Prakash Rozario	General Surgery

St. John's Inaugurated 2nd MRI with latest Upgrades



10th February 2021: Upgraded 1.5 Tesla MRI (Magnetic Resonance Imaging) with latest 2021 version software and applications was inaugurated by the management and dedicated for the patient Services. With this, St. John's medical college hospital is equipped with two MRIs, a latest 3Tesla MRI as well as 1.5T MRI for better patient care.

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Whole Body Potassium Counter - safe and non-invasive method to measure body composition across the life cycle

- Dr. Rebecca Kurian Raj (Professor, Head, Division of Nutrition),
Dr. Anura V Kurpad (Professor, Dept. of Physiology)

Low Birth Weight (LBW) is still quite common in India. Many causes have been postulated for LBW, but a critical one is the nutrition of the mother. It is really a mystery how mothers support the growth of a very hungry fetus: obviously her diet is very important, but she also gives up her own nutrient stores, if her diet is inadequate. A good start with diet is to look at the building blocks of tissues, - that is protein, and maternal protein requirement and intake. If there are inadequate building blocks, babies will not grow well. Thus, the critical question of how much total protein is eaten by pregnant Indian women, and how this affects body protein and fetal accretion, particularly during late pregnancy needs to be addressed.

How do we do this? If we could measure the amount of protein deposited (or accreted) during pregnancy in mothers who were eating well and their babies, then we have a clue as to how much protein is required during the different phases of pregnancy. We measure this by careful and accurate measurements of the body tissues (mother and baby combined). The body tissues are composed of cells, in aggregate called the body cell mass (BCM). This is the 'active cell mass' of the body and does not include the extracellular fluid or support structures. The BCM contains the building blocks of protein. So, if we have a good readout of the BCM, we have a readout of protein – and its accretion, and therefore its requirement as pregnancy progresses.

You might think it is trivial to measure the body composition during pregnancy, but it is not. This is because body composition measurements in pregnancy are limited due to factors such as hydration status and safety issues related to radiation exposure. So, we need a safe, accurate and non-invasive measurement. Back to BCM: we can measure this by first measuring the total body potassium (TBK) – which exists almost completely inside cells, or inside the BCM. The mass of TBK in the body contains a naturally occurring radioactive potassium isotope (40K).

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Whole Body Potassium Counter contd...

The proportion of the isotope to the natural K is remarkably constant; therefore, if we could measure the total amount of isotopic K in the body, we can estimate the total potassium in the body. We do this by accurately counting the gamma rays emanating from the ^{40}K in the body and can eventually get an accurate measure of the body cell mass (BCM). This is considered the “gold” standard method worldwide, as it is not affected by water retention during pregnancy. Indeed, the TBK method was the reference method used by the World Health Organization (WHO) in defining protein requirements during pregnancy and this facility was NOT available in Asia and India.

To address this gap, a state of art, whole body potassium counter has been built at St John’s Research Institute (SJRI). This uses an advanced technology as counting gamma rays emanating from the body requires that the counting is performed in a ‘shielded’ environment, where interference from radiation emanating from other sources is blocked. A ‘shadow-shield’ facility, with 4 large volume sodium iodide crystal detectors has been built with financial support through a research grant from the Department of Biotechnology, Govt of India, to Dr Rebecca Kuriyan and Dr Anura Kurpad.

ACHIEVEMENTS TO DATE

Protein requirements for Indian pregnant women have been estimated using the whole-body potassium counter at SJRI & the findings have been published in the American Journal of Clinical Nutrition. These results have also been used to inform the ICMR-NIN requirements and the *Poshan Abhiyaan*.

WHO DO WE WORK WITH?

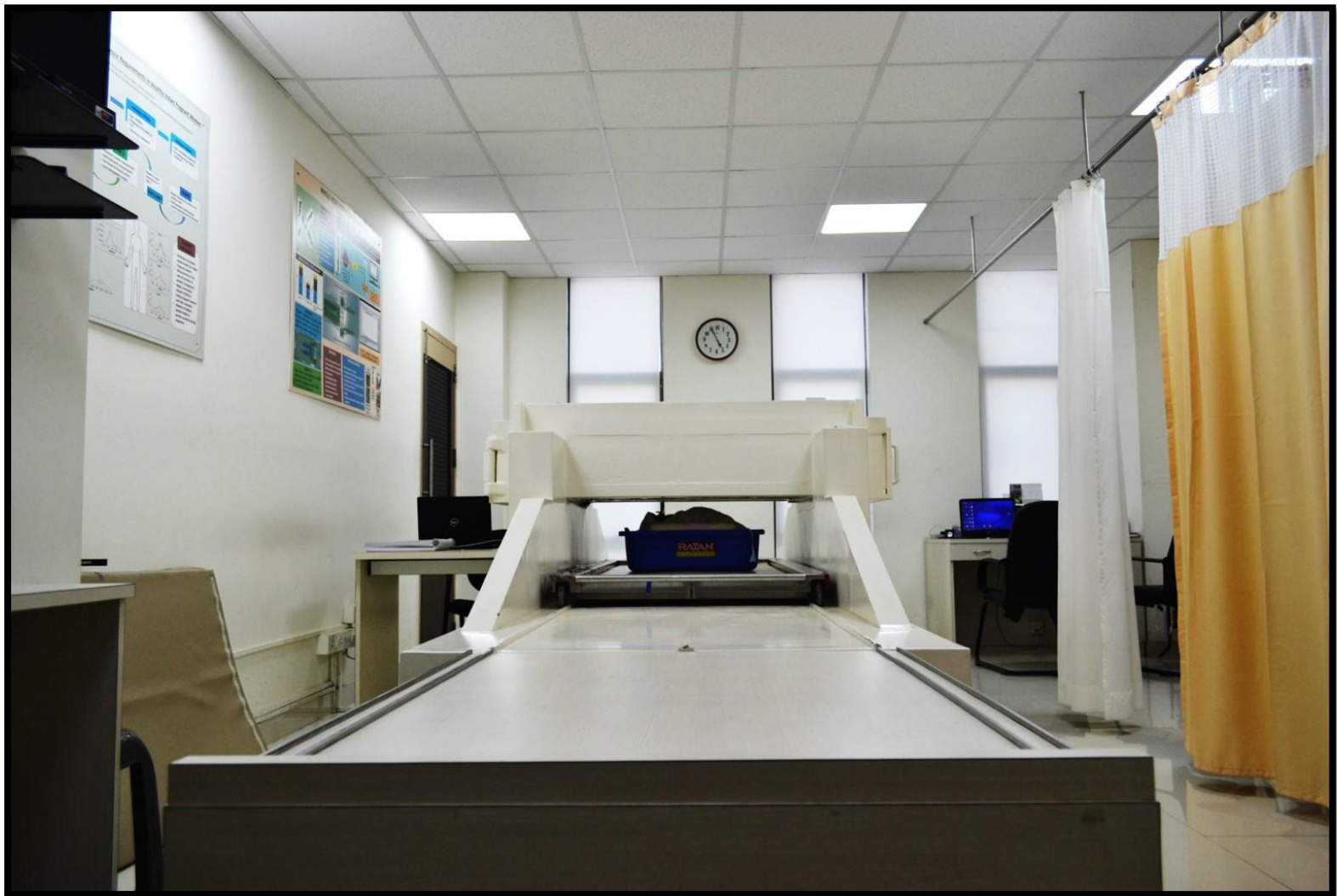
The Division of Nutrition is collaborating with clinicians from several departments of the SJMCH: neonatology, pediatrics, pediatric oncology, pediatric nephrology, in areas of infant body composition, body composition in severe acute malnutrition, chronic renal failure, pediatric cancers, diabetes and sarcopenia in elderly. A student has completed her PhD, while four PhD students are currently working on different research using the K counter. The findings of these studies will provide novel data and inform policy in clinical and public health nutrition.

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Whole Body Potassium Counter - safe and non-invasive method to measure body composition across the life cycle

- Dr. Rebecca Kurian Raj (Professor, Head, Division of Nutrition),
Dr. Anura V Kurpad (Professor, Dept. of Physiology)

The picture below depicts a newborn baby being measured in the shadow-shield (the white structure) whole-body potassium counter; the baby lies in a cradle directly below the counting crystals, located in the shielded white box.

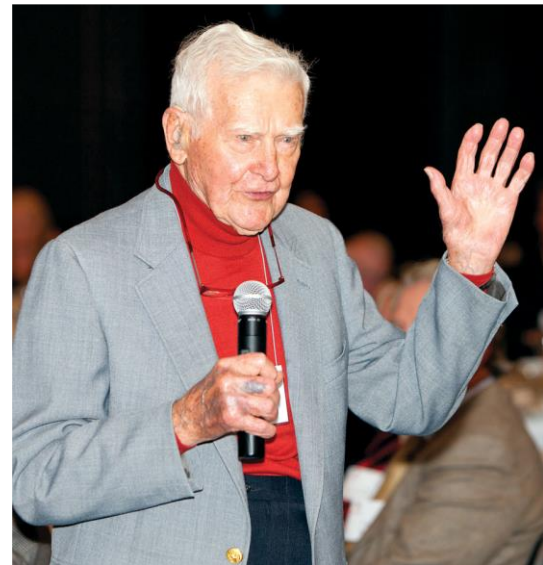


St. John's has Re-Invented Shillings Test to measure Vitamin B12 Absorption

December 2020

Department of Physiology and Nutrition

About 70 years ago, Dr Schilling reported on his test to measure vitamin B₁₂ absorption in patients with pernicious anaemia. The Schilling test used a radioactive tracer of Cobalt within the cyanocobalamin molecule, and this eventually transformed the care of patients. Over the next few decades, the test was used extensively, until fears about the dangers of radiation led to a decline in its use, particularly in the general public. Indeed, for the last 2-3 decades or so, the Schilling test has not been used, in general.



Dr. Robert Frederick Schilling, 1919 – 2014.
(Ref: Lancet)

Attempts were made to find other tests to measure vitamin B12 absorption, since this is still a clinical problem. These alternative tests included surrogates like transcobalamin, as well as an attempt to use 'softer' radiation with ¹⁴C-labelled cyanocobalamin tracers (but these were still radioactive!).

So, there was an impasse: certainly in India, there has been a suspicion that vitamin B12 deficiency exists in a large part of the population, and that absorption may not be 100% effective. Consequently, mega-doses of vitamin B12 have been used to treat clinical deficiency, and in public health, one sees trials with 10-500 times the daily requirement, to compensate for a suspicion of poor absorption.

And why not? There were no reported side-effects of high vitamin b12 intake stated in the textbooks. Until a case report in 2020 (Clin Toxicol (Phila). 2020;58:129-131), which suggested that dosing (for severe pernicious anaemia) with 1 mg vitamin B₁₂/day up to a total intake of 12 mg, resulted in myriad side effects, including akathisia, which resolved on stopping the intake. In clinical medicine, there were also reports of potential toxicity: high plasma concentrations of vitamin B₁₂ were associated with impaired renal function (*BMC Nephrol.* 2015;16(1):7) and increased risk of all-cause mortality among dialysis patients (*Nephrol Dial Transplant.* 2017;32(6):1024-1032).

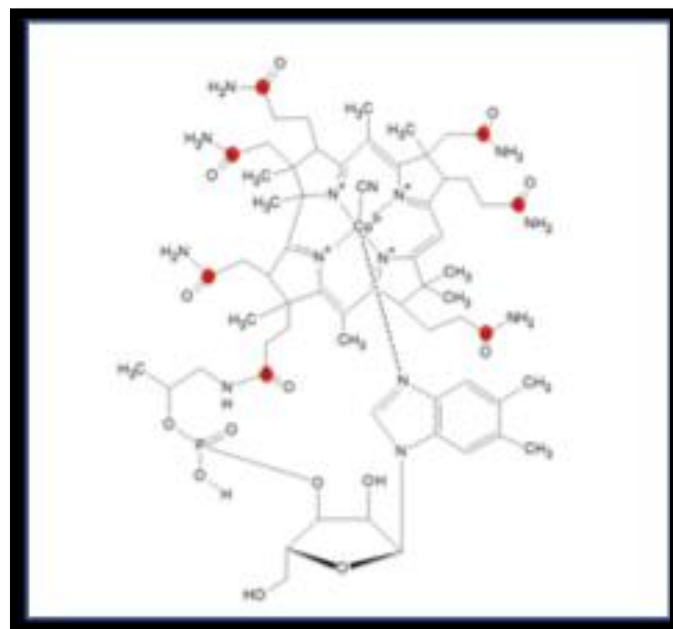
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However, the risk in a general population was unknown, until a recent study from the Netherlands showed that higher plasma levels of vitamin B12 (including among those who took supplements) were associated with increased risk of all-cause mortality in the general population, after adjusting for age, sex, renal function etc (JAMA Netw Open. 2020;3(1):e1919274).

This tells us is that we need to measure vitamin B12 absorption to rationalize its dosing, both in clinical medicine and public health. But how?

Dr Sarita Devi worked on this, in a study funded by the Department of Biotechnology. She used a culture of *Salmonella typhimurium* to synthesize cyanocobalamin– feeding its culture with a ¹³C labelled precursor that found its way into the biosynthesized cyanocobalamin molecule. She characterized this on a Maldi-MS, and then upscaled production to eventually procure large quantities of the vitamin, tested its safety, and eventually was able to create the new Schilling test, fondly called the Devi test (see below), including setting up mass spectrometric protocols for analyses. Her colleague Dr Kurpad said: “This was not a trivial task, as many had tried before. She also faced many critiques from me and it is a tribute to her to go so far and to prove that she was right!”.

Based on this publication, the daily requirement for vitamin B12 has already been raised in India, from 1 to 2 ug/day. Currently, many people from around the world are asking for collaboration, and Sarita is engaging with these groups – as she has been told- everyone around the world is now circling back to St John’s for this technique!



REF: Sarita Devi, Roshni M Pasanna, Zeeshan Shamshuddin, Kishor Bhat, Ambily Sivadas, Amit K Mandal, Anura V Kurpad, Measuring vitamin B-12 bioavailability with [¹³C]-cyanocobalamin in humans, *The American Journal of Clinical Nutrition*, Volume 112, Issue 6, December 2020, Pages 1504–1515

Acknowledgement: Dr. Anura V Kurpad,
Professor, Department of Physiology

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St John's WATCHDOG

WhatsApp

COVID inoculations for Indian citizens aged > 50 years

Overview – COVID inoculations for Indian citizens aged > 50 years.

The message : The following message has been circulating in a virally on WhatsApp - "There is talk that registration for inoculation will open for 50+ age group citizens. Please keep watching the CoWin site and app linked below. As yet both are only open for viewing and login by vaccinators. But the option to register could pop up sometime after February 15. When it does, you can register with your PAN card number and other details as required. You will be able to opt for the hospital most convenient to you. Once accepted, you will get an SMS confirming your registration with a 14-digit registration number. In due course after that, you will get another SMS giving you a date and time for vaccination at the hospital you opted for. If you are particular about which vaccine you would like to take, please check with the hospital of your choice about which one they are allotted."

FACT

The above message has been fact checked by the Press Information Bureau of India and has been clarified by the Ministry of Health and Family Welfare, GoI. Both agencies have clarified that **no such decision** has been taken as yet by the Government. However, we must note that under the restricted emergency use access, after inoculating healthcare, military and administrative personnel, **civilian people aged above 50 and those under 50 with certain co-morbidities** will be eligible to be vaccinated. However, vaccination of the civilian population has not yet begun.



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WhatsApp

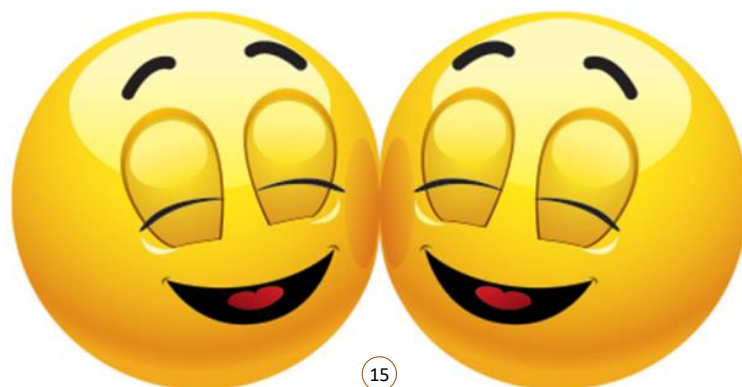


LAUGHTER IS THE BEST MEDICINE...



Didn't you know? He's a child prodigy!

We are lucky!
We are in a civilised
desert.....



Best of RK Laxman,
Times of India

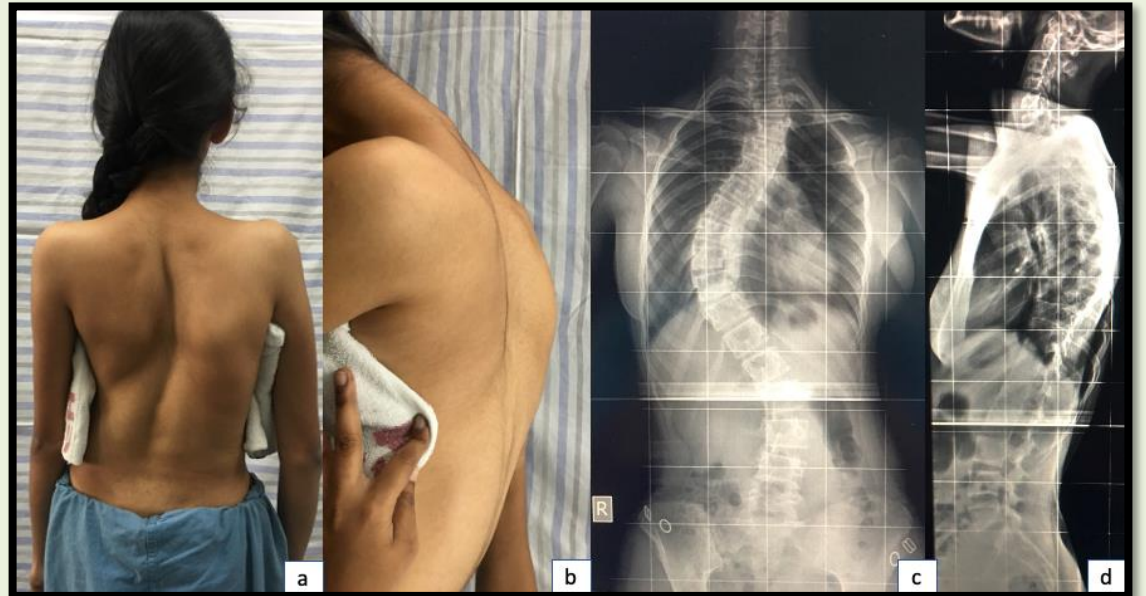
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SURVIVOR'S CORNER

The Crooked Spine!

A 16 year old female hailing from Kadaba taluk of Dakshina kannada district presented with a deformity in her back, which her parents incidentally noticed 3 months before presenting to us. The family had consulted



many practitioners at hospitals near their place; and looked visibly concerned about the child's condition. On clinical and radiological evaluation, the child was diagnosed to have an adolescent idiopathic scoliosis with a right thoracic curve of 68° magnitude. The spinal deformity in this case had started showing its ill-effects as noticed by the shoulder imbalance and the truncal shift towards the right.

At the end of the evaluation, it was obvious that the child would require surgical intervention; to stop the curve progression and prevent/correct the cosmetic disfigurement

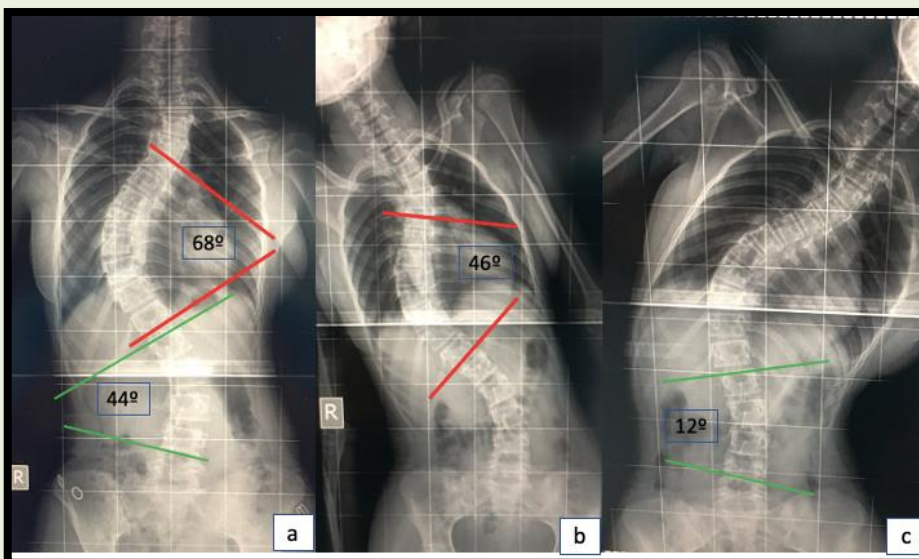


Figure: a: Erect radiograph showing a 68° right thoracic and a 44° left lumbar curve. (b, c): On bending the thoracic curve was reducing to 46° and the lumbar curve to 12°.

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SURVIVOR'S CORNER

Now comes the up-hill task of breaking this news to the attenders! There were two things which were evident during the discussion with the family. The fear of undergoing a major surgical procedure like a scoliosis correction surgery and the financial constraints which they were going through. Added to this there were misconceptions about the surgical procedure which were put forth by their kith and kin. As parents, they were also worried about the future social life of the child after the surgery. So, we as surgeons should spare a lot of time for this discussion, especially in deformity correction surgeries. Finally, the family agreed to the surgical procedure and we started our pre-operative work up.

Pre-operative work up: Along with the routine investigations as in any other major surgical procedure, scoliosis surgery specifically needs evaluation of the chest function of the patient. The patient underwent a pulmonary function test (PFT), which showed a restrictive pattern. Considering this the child underwent a chest physio program and incentive spirometry sessions, days before the surgical procedure. Anxiety levels in the child were high which required counselling sessions from our psychiatry team. Once the patient is fit for the surgical procedure, we were left with the mammoth task of procuring the implants and other supportive instruments for the procedure. It took two rounds of discussion with the implant company representatives, before they agreed to supply the implants at a concessional price. Since scoliosis correction accompanies spinal cord manipulation, monitoring of the spinal cord function with continuous Somatosensory Evoked Potential (SSEP's) and Motor Evoked Potential during the procedure is a necessity. We approached 2 to 3 neuromonitoring service providers and considering the financial constraints in our patient, one of the service provider was kind enough to offer the services "free of cost". Blood and other blood products required for the surgery were arranged at no cost, by the courtesy of our blood bank team. Once all this was done, we were ready for the "D" – day, the day of surgery.

Surgery: Considering this to be a long procedure, our anaesthesia team were kind enough to start the case before schedule. Since neuromonitoring requires the procedure to be done under Total Intravenous Anaesthesia (TIVA), the anaesthesia team had to manage the entire procedure under intravenous anaesthesia.

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SURVIVOR'S CORNER

Adequate padding of the eyes and other bony points is essential in these long procedures. Neuromonitoring personnel attached the leads to obtain an initial reading which serves as a base-line for the rest of the procedure. Without going into the details of the surgical procedure, any deformity correction procedure involves putting pedicle screws at strategic points along the spine, doing bony resections/osteotomy to obtain flexibility of the spine and reducing the deformity to the contoured rods by various manoeuvres. During all the critical steps, a check on the neuromonitoring signals is essential. After completion of the surgical procedure, due care should be taken to achieve adequate soft tissue cover over the implants as well as to give a cosmetically acceptable scar to the patient.

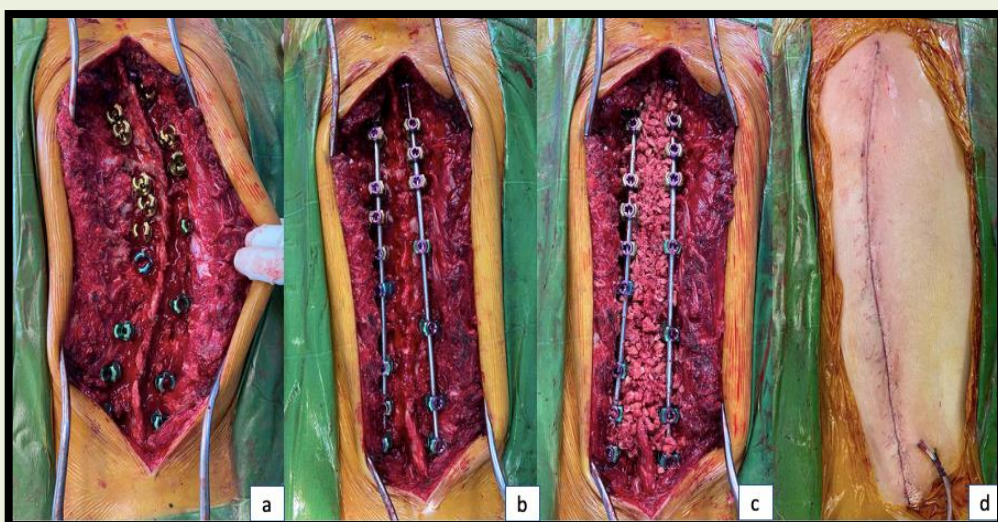


Figure: Intraop images. a: After pedicle screw instrumentation. b: Deformity corrected by application of rods and correction manoeuvres. c: Allograft and autograft mixture put on the bone graft bed to hasten fusion process. d: Cosmetic scar after closure



Scoliosis is a morbid surgical procedure and post-operative pain management is very important in these patients. Suboptimal pain management after PSF leads to exaggerated stress and anxiety in patients, with the subsequent inability to participate in postoperative physiotherapy regimens. We used proper timing of the analgesics & utilized multi-modal analgesia (oral, transdermal). Due to this, she was out of the bed & started walking on post op day 2. The patient could be discharged on post-operative day 7

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Acknowledgement: Dr. Ankit NV, MS, DNB (ortho), FNB spine, Senior Resident. Dr. Anjali TM Olapally, Assistant Professor, Anesthesiology and Mrs. Mary, Scrub Nurse

PEARLS OF WISDOM

Kindness is a language the deaf can hear and the blind can see.

- Mark Twain



© Amazon.com



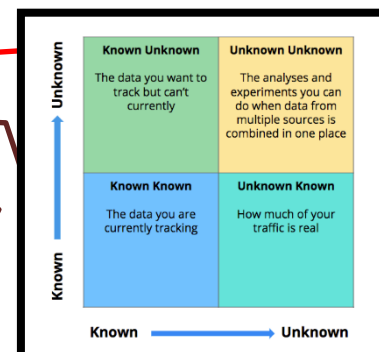
shutterstock.com • 1315296413

Ignorance is not saying, I don't know. Ignorance is saying, I don't want to know.

- Unknown

Start by doing the necessary, then the possible, and suddenly you are doing the impossible.

- St. Francis of Assisi



© Singular

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

Did You Know?

Each insect is a host to ten bacterial species.

There are around 2 billion species on Earth—with 6.8 million likely to be species of insects. And up to 10 types of bacteria lives inside of each of these insects!



© Readers Digest

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Insurance Section

Insurance section started in SJMCH as a desk within the billing section in 2007. In 2010, it became an individual department. The Insurance Department was merged back with the Billing Section in 2017, from when Mr. Peter Martin took charge as the in-charge. Billing section includes 4 main areas: Cash, Credit, Shared services and Admin.

- **Cash** involves 34 staff working as Billing cashiers and Pharmacy cashiers
- **Credit** involves 20 staff working in front office and back office under Insurance, Companies/ Corporate, Religious, Internal (Staff, Student, Projects) and Govt Business Schemes
- **Shared Services** includes 23 staff in Query, Filing, IP bill preparation
- **Admin** includes 4 staff.

Currently, they process all private Insurance in India including Insurance issued abroad by their associates/ affiliates. The section as of now does not process any one of the four government insurances (GIPSA).

They have 4 counters for credit billing:

- B1: Government Schemes
- B2: Internal credit
- B3: Corporate
- B4: Insurance



Front office involves credit billing, pre-authorization and client interaction. Back office involves final bill preparation, bill processing, dispatch, and reconciliation of accounts. The internal credit services given to staffs, students and for projects include the entire SJNAHS crediting which takes place in this section. The section works round the clock in addressing insurance claims during the inpatient admission but final bill processing is done only during the day time working hours. The team also has nurse involved and a staff from an outsourced organization for insurance processing



Know Your Hospital!

Insurance



Insurance Section

THE TEAM

DEPARTMENT



THE TEAM (Left to Right): Chandrasekhar, Harish, Ruth Grace, Lawrence Oliver (Incharge), Bharathi, Sanjay Kumar, Sr. Maria Rani, Uday, Sindhu K B, Alice, Mercy John, Priya, Jyothi Mamatha, Stalin Franglin, Franklin V P, Peter Martin (Head of Department)

DEPARTMENT



Insurance

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*What's Up?
@St John's Hospital*





GREY *Matters!*



DISORDERS/SYNDROMES AND FICTIONAL CHARACTERS

1. Optimism is a desirable trait but being overly optimistic is a disease! Which is this disorder named after the protagonist of a popular children's novel?
2. Hats make you look honourable but making them can drive you nuts! Name this malady and its cause. (Figure 1)
3. The 'smothering-with-love' mother and the eternally child-like offspring- name the 2 syndromes associated with these character traits named after Disney characters. Picture clue below? (Figure 2)
4. This fictitious character [Figure 3] has a medical syndrome named after him although his exploits were non-medical. Name the syndrome and its manifestations.
5. This fastidious lady was too conscious to cough and this resulted in an infectious disease being named after her. Name the syndrome?



Figure 1



Figure 2



Figure 3



[CLICK HERE FOR ANSWERS](#)

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New Section!!

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Thiamine-responsive acute severe pulmonary hypertension in exclusively breastfeeding infants: a prospective observational study

Usha M K Sastry¹, Jayranganath M², Raman Krishna Kumar³, Santu Ghosh⁴, Bharath A P², Anand Subramanian², Ameetkumar Managuli², Madhu Gangadhara², Cholenahally Nanjappa Manjunath⁵

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Abstract

Objectives: Severe pulmonary hypertension (PH) causing right heart failure can occur due to thiamine deficiency in exclusively breastfeeding infants. This study describes the clinical profile and management of thiamine-responsive acute pulmonary hypertension.

Methods: A prospective observational study of infants presenting with severe PH without any other significant heart or lung disease. History of symptoms, clinical examination, echocardiography and basic investigations were performed. Dietary patterns of mothers were recorded. Thiamine was administered and serial echocardiography was performed.

Results: A total of 250 infants had severe PH and 231 infants responded to thiamine. The mean age was 3.2 ± 1.2 months. Fast breathing, poor feeding, vomiting and aphonia were the main symptoms. Tachypnoea, tachycardia and hepatomegaly were found on examination. Echocardiogram revealed grossly dilated right heart with severe PH. Intravenous thiamine was administered to all the babies based on clinical suspicion. Clinical improvement with complete resolution of PH was noticed within 24-48 hours. Babies were followed up to a maximum of 60 months with no recurrence of PH. All the mothers consumed polished rice and followed postpartum food restriction.

Conclusion: Thiamine deficiency is still prevalent in selected parts of India. It can cause life-threatening PH in exclusively breastfeeding infants of mothers who are on a restricted diet predominantly consisting of polished rice. It can contribute to infant mortality. Thiamine administration based on clinical suspicion leads to remarkable recovery. High degree of awareness and thiamine supplementation in relevant geographical areas is required to tackle this fatal disease.

Keywords: cardiology; general paediatrics; infant feeding; intensive care; nutrition.

Arch Dis Child. 2020 Sep 3;archdischild-2019-318777. doi: 10.1136/archdischild-2019-318777.



Vitamin A deficiency among children younger than 5 y in India: an analysis of national data sets to reflect on the need for vitamin A supplementation

G Bhanuprakash Reddy, Raghu Pullakhandam, Santu Ghosh, Naveen K Boiroju, Shalini Tattari, Avula Laxmaiah, Rajkumar Hemalatha, Umesh Kapil, Harshpal S Sachdev, Anura V Kurpad

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Abstract

Background: Biochemical vitamin A deficiency (VAD) is believed to be a serious public health problem (low serum retinol prevalence >20%) in Indian children, justifying universal high-dose vitamin A supplementation (VAS).

Objective: To evaluate in Indian children younger than 5 y the risk of biochemical VAD from the Comprehensive National Nutrition Survey, as well as dietary vitamin A inadequacy and excess over the tolerable upper limit of intake (TUL) from national and subnational surveys, factoring in fortification and VAS.

Methods: Child serum retinol data, corrected for inflammation, were examined to evaluate national- and state-level prevalence of VAD. Simultaneously, dietary intakes from the National Sample Survey Office and the National Nutrition Monitoring Bureau were examined for risk of dietary vitamin A deficiency against its average requirement (AR) derived for Indian children. Theoretical estimates of risk reduction with oil and milk vitamin A fortification were evaluated along with the risk of exceeding the TUL, as well as when combined with intake from VAS.

Results: The national prevalence of biochemical VAD measured in 9563 children was 15.7% (95% CI: 15.2%, 16.3%), and only 3 states had prevalence significantly >20%. The AR of vitamin A was 198 and 191 $\mu\text{g}/\text{d}$ for boys and girls; the risk of dietary inadequacy was ~70%, which reduced to 25% with oil and milk fortification. Then, the risk of exceeding the TUL was 2% and 1% in 1- to 3-y-old and 4- to 5-y-old children, respectively, but when the VAS dose was added to this intake in a cumulative 6-mo framework, the risk of exceeding the TUL rose to 30% and 8%, respectively.

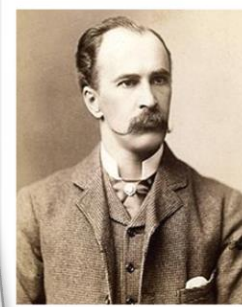
Conclusion: The national prevalence of VAD risk is below 20% in Indian children. Because there is risk of excess intake with food fortification and VAS, serious consideration should be given to a targeted approach in place of the universal VAS program in India.

Am J Clin Nutr. 2020 Dec 16;nqaa314. doi: 10.1093/ajcn/nqaa314

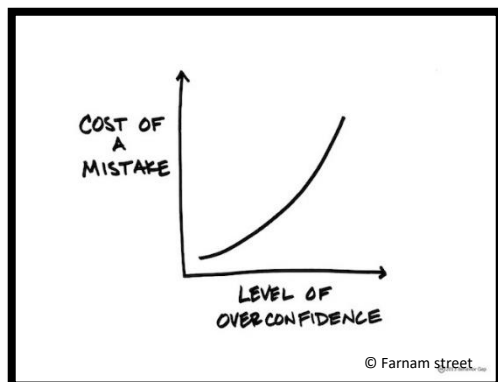
THE QUOTABLE OSLER

Success depends on attitude.

Not only will your success in life, but your happiness depend upon the attitude of mind which you habitually assume towards your fellow-creatures.



SIR WILLIAM OSLER



Don't overestimate yourself.

Enjoying the privilege of wide acquaintance with men of very varied capabilities and training, you can, as spectators of their many crochets and of their little weaknesses, avoid placing an undue estimate on your own individual powers and position.

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



MEDICINE THIS MONTH

A Bird's Eye View.....

Low dose aspirin for those with previous pregnancy loss (miscarriage)

While low dose aspirin improves pregnancy outcomes for individuals at high risk for preeclampsia or with antiphospholipid syndrome, initial trials evaluating LDA to reduce the risk of pregnancy loss in the general population did not report a benefit. However, in a post hoc analysis of a randomized trial of patients with 1 or 2 previous pregnancy losses, LDA started preconception and continued throughout pregnancy was associated with approximately 30 percent fewer pregnancy losses and 30 percent more live births compared with placebo .

- Naimi et al. Ann. Intern.Med. 2021.

One-time HCV screening for all adults ≥18 years

In April 2020, the US Centers for Disease Control and Prevention (CDC) recommended that all adults ≥18 years be screened at least once for chronic hepatitis C virus (HCV) infection . The CDC recommendations differ from the US Preventive Services Task Force (USPSTF) recommendations issued in March 2020, which included an upper age limit of 79 years for universal screening . Previously, screening was recommended only for patients who had certain risk factors or were born during certain decades, but this approach results in many missed diagnoses. The improved efficacy, tolerability, and accessibility of antiviral treatment for HCV also support a broader screening strategy. We agree with the new CDC recommendation for broad one-time screening in all adults, and we continue to suggest repeat screening in individuals with ongoing risk factors.

- Schillie et al. CDC 2020



REFERENCE 1: MEDICINE THIS MONTH

When used as prescribed before conception by women with prior pregnancy loss, does low-dose aspirin improve pregnancy outcomes?



Annals
of Internal Medicine

Naimi AI, Perkins NJ, Sjaarda LA, et al. The effect of preconception-initiated low-dose aspirin on human chorionic gonadotropin–detected pregnancy, pregnancy loss, and live birth. Per protocol analysis of a randomized trial. *Ann Intern Med.* 26 January 2021. [Epub ahead of print]. doi:10.7326/M20-0469 <http://acpjournals.org/doi/10.7326/M20-0469>

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REFERENCE 2: MEDICINE THIS MONTH

Recommendations and Reports

CDC Recommendations for Hepatitis C Screening Among Adults — United States, 2020

Sarah Schillie, MD¹; Carolyn Wester, MD¹; Melissa Osborne, PhD¹; Laura Wesolowski, PhD¹; A. Blythe Ryerson, PhD¹

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Summary

Hepatitis C virus (HCV) infection is a major source of morbidity and mortality in the United States. HCV is transmitted primarily through parenteral exposures to infectious blood or body fluids that contain blood, most commonly through injection drug use. No vaccine against hepatitis C exists and no effective pre- or postexposure prophylaxis is available. More than half of persons who become infected with HCV will develop chronic infection. Direct-acting antiviral treatment can result in a virologic cure in most persons with 8–12 weeks of all-oral medication regimens. This report augments (i.e., updates and summarizes) previously published recommendations from CDC regarding testing for HCV infection in the United States (Smith BD, Morgan RL, Beckett GA, et al. Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945–1965. MMWR Recomm Rec 2012;61[No. RR-4]). CDC is augmenting previous guidance with two new recommendations: 1) hepatitis C screening at least once in a lifetime for all adults aged ≥18 years, except in settings where the prevalence of HCV infection is <0.1% and 2) hepatitis C screening for all pregnant women during each pregnancy, except in settings where the prevalence of HCV infection is <0.1%. The recommendation for HCV testing that remains unchanged is regardless of age or setting prevalence, all persons with risk factors should be tested for hepatitis C, with periodic testing while risk factors persist. Any person who requests hepatitis C testing should receive it, regardless of disclosure of risk, because many persons might be reluctant to disclose stigmatizing risks.

Introduction

Hepatitis C is the most commonly reported bloodborne infection in the United States (1), and surveys conducted during 2013–2016 indicated an estimated 2.4 million persons (1.0%) in the nation were living with hepatitis C (2). Percutaneous exposure is the most efficient mode of hepatitis C virus (HCV) transmission, and injection drug use (IDU) is the primary risk factor for infection (1). National surveillance data revealed an increase in reported cases of acute HCV infection every year from 2009 through 2017 (1). The highest rates of acute infection are among persons aged 20–39 years (1). As new HCV infections have increased among reproductive aged adults, rates of HCV infection nearly doubled during 2009–2014 among women with live births (3). In 2015, 0.38% of live births were delivered by mothers with hepatitis C (4).

This report augments (i.e., updates and summarizes) previous CDC recommendations for testing of hepatitis C among adults in the United States published in 1998 and 2012 (5,6). The recommendations in this report do not replace or modify previous recommendations for hepatitis C testing that are

based on known risk factors or clinical indications. Previously published recommendations for hepatitis C testing of persons with risk factors and alcohol use screening and intervention for persons identified as infected with HCV remain in effect (5,6). This report is intended to serve as a resource for health care professionals, public health officials, and organizations involved in the development, implementation, delivery, and evaluation of clinical and preventive services.

Epidemiology

In 2017, a total of 3,216 cases (1.0 per 100,000 population) of acute HCV infection were reported to CDC (1). The reported number of cases in any given year likely represents less than 10% of the actual number of cases because of underascertainment and underreporting (7). An estimated 44,700 new cases of HCV infection occurred in 2017. The rate of reported acute HCV infections increased from 0.7 cases per 100,000 population in 2013 to 1.0 in 2017 (Figure 1) (1). In 2017, acute HCV incidence was greatest for persons aged 20–29 years (2.8) and 30–39 years (2.3) (1). Persons aged ≤19 years had the lowest incidence (0.1) (1). Incidence was slightly greater for males than females (1.2 cases and 0.9, respectively) (1). During 2006–2012, the combined incidence of acute HCV infection in four states (Kentucky, Tennessee, Virginia, and West Virginia) increased 364% among persons

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RESEARCH SNIPPETS

Coefficient of Variation (CV)-a unit free measure of variability

The coefficient of variation (CV) is an absolute measure of variability which is unit free. It is the ratio of the standard deviation to the mean. We express CV as a percentage and derive by following formula:

$$CV(\%) = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

The above formula can be replaced by 'ratio of interquartile range to median' in case of asymmetric shape of data. More generic definition of CV could be the ratio of variability to average of any measurable trait. The CV (SD to Mean ratio) can also be used to assess the shape of the data. In case cv is less than 50%, we can assume normality, otherwise data is considered as asymmetric or violates normality assumption.

Advantage:

- As it is a ratio of two measures of same unit, resultant value is unit free. An absolute measure can be used to compare the variability of any characteristics or traits irrespective of their measuring units or scales.
- For example, one can compare variability of weight against height, even though they are measured by different units of different traits. But standard deviation cannot be used in this context.

Disadvantage: There are some requirements that must be met for the CV to be interpreted in the ways it is described.

- The most obvious problem arises when the mean of a variable is zero. In this case, the CV cannot be calculated.
- Even if the mean of a variable is not zero, but the variable contains both positive and negative values and the mean is close to zero, then the CV can be misleading.
- The CV of a variable or the CV of a prediction model for a variable can be considered as a reasonable measure if the variable contains only positive values.

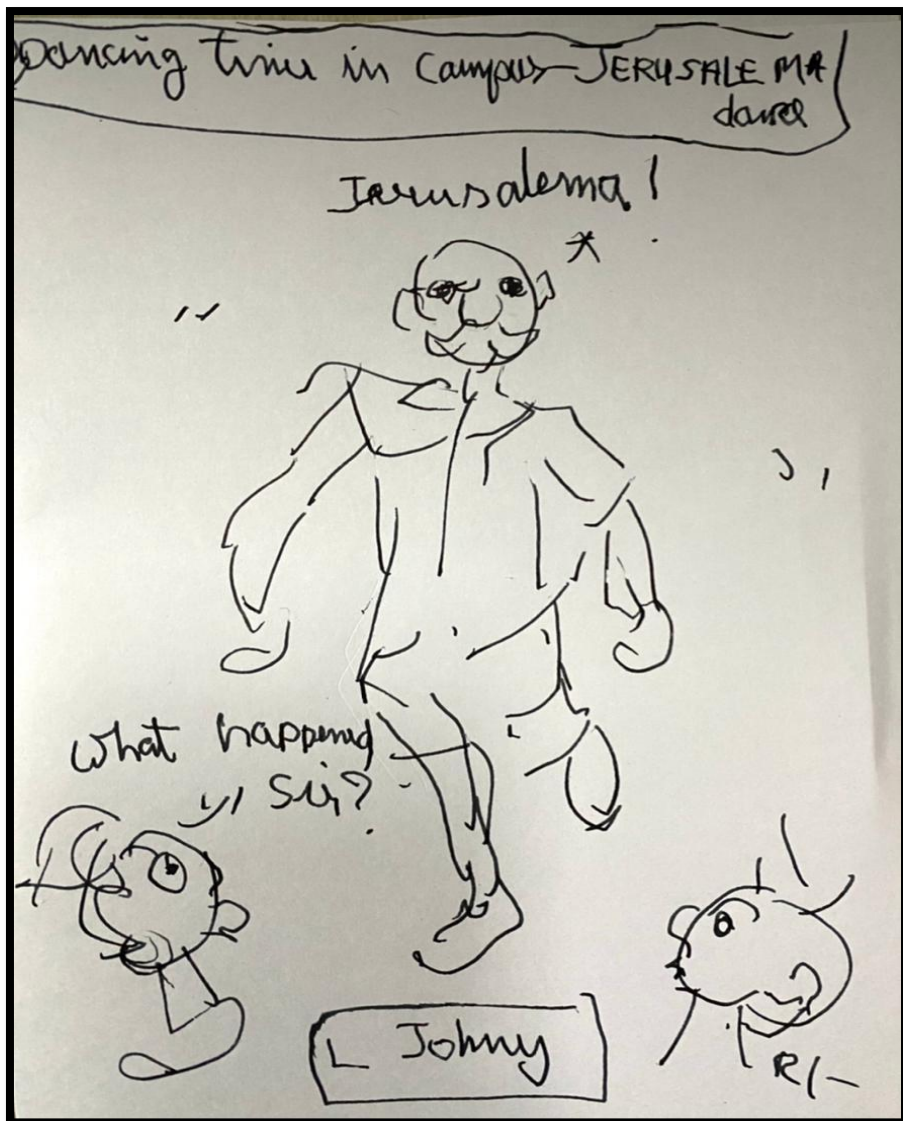
RESEARCH SNIPPETS

Coefficient of Variation (CV)-a unit free measure of variability - Example

Compare a hexokinase method and glucose oxidase method for measuring glucose. The standard deviation for the hexokinase method is 4.8. The standard deviation for the glucose oxidase method is 4.0. Based on the standard deviation, you might conclude the glucose oxidase method is more precise than the hexokinase method. However, in this example, a comparison of the CV shows the methods are equally precise. Assuming the mean for the hexokinase method is 120 and the mean for the glucose oxidase method is 100, the CV for both methods is 4%. The reason for difference in standard deviation is the difference in scale used by two methods.

L Johnny

Art by: Dr. Rakesh Ramesh



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GREY Matters!



**DISORDERS/SYNDROMES AND
FICTIONAL CHARACTERS**

ANSWERS

1. Polyanna syndrome
2. Mad hatter syndrome/ Mercury poisoning/ Erythretism
3. Wendy syndrome and Peter-Pan syndrome
4. Munchausen syndrome, hypochondriasis/ factitious disorder
5. Lady Windermere syndrome characterised by middle lobe bronchiectasis secondary to Mycobacterium avium infection



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NTP PPO 2021

NATIONAL TRAINING PROJECT - PRACTICAL PEDIATRIC ONCOLOGY

Organized by:

Division of Pediatric Hematology, Oncology and SCT,
St John's Medical College Hospital, Bengaluru

Date: 13th March, 2021
Timings: 9 A.M. - 4 P.M.

Venue: CG Hall, St John's Medical College,
Bengaluru

Registration fee: Rs. 1000/-
Number of participants limited to 30 only.
Registration closes on : **28th Feb, 2021**

Interested participants kindly fill up this
pre-registration form:

<https://bit.ly/3d79xCH>



Upon filling, you will receive a call from the organizing
committee to proceed with payment and confirming
your registration.

(Prior Registration mandatory)

Organizing faculty:

Dr. Anand Prakash

Dr. Vandana Bharadwaj

Dr. Jyothi M

Contact details: phoacadsjmch@gmail.com

Dr. Manasa: 7038828120

Dr. Navyasri: 9176707796

Dr. Niteesh : 9741636686

Early detection and referral is the key



Childhood cancer is curable

THEME:-

Community Pediatrician: An integral
part of cancer cure

Highlights:

- ★ Interactive & problem based learning
- ★ Approach to Pediatric malignancies from expert faculty.
- ★ Small group work with real life case scenarios encountered in Pediatric office practice.
- ★ Subtle signs for early detection of cancer by a Pediatrician.
- ★ Pediatric Oncological Emergencies and their initial management / stabilization.
- ★ Do's and Dont's prior to referral in a suspected cancer.
- ★ Shared care of Kids with Cancer - Pivotal role of Pediatrician

With warm regards from,

Dr. Mamta Manglani
Chairperson, IAP-PHO

Dr. Mallikarjun H B
President, IAP-BPS

Dr. Ashok R Datar
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