



THE CPU



Nov., Dec.-2018

Official Bulletin of CMIC-IAP
Computer & Medical Informatics Chapter
Email : cmic.iap@gmail.com

Message from Chairperson

My dear ePediatricians,
Greetings from the Computers and Medical Informatics Group of IAP.
It is always a pleasure to communicate through CPU – our official magazine of CMIC.
Wishing you all a very Happy New Year.



We are proud of our CMIC team led by Dr Sanjeev Goel, who very successfully handled the "Indian Pediatrics" journal being subscribed by members in Hardcopies and Softcopies. Of the 28,000 members – valid email and mobile of 25,000 were supposedly available. Responded Pediatricians were 10,000 of which 7,000 opted for Hardcopies and 3,000 opted for softcopies. Remaining members by default were sent only softcopies.

Quite a few members of our CMIC were involved in the making of the website of Central IAP and I am thankful to them all. Jeeson Unni, our Editor-in-chief, has been doing a tremendous work maintaining and updating the IAP Drug Formulary App, Books, Website, etc. We are to have the release the IAP Drug Formulary 2019, the 5th hard copy textbook edition, by IAP President Dr Santosh Soans, at the IAP CMIC National Conference at Kolkata on Dec 8/9th 2018.

I thank my advisors Dr Naveen Thacker, Dr C P Bansal and Dr Satish Pandya. I sincerely thank our Immediate past President Dr Yatin Mehta and my dynamic Secretary Dr Sanjeev Goel. I also thank our energetic treasurer Dr Samir Shah for his active participation in everything. I take this opportunity to thank my Executive Committee members Dr Pallab Chatterjee, Dr Gaurav Gupta, Dr Maulik Shah, Dr Pritesh Nagar and Dr Mallesh Gowda.

I also sincerely thank all my members and wish them all the best.
Yours truly

Dr Manoj Ambwani

Message from Secretary

Dear e-friends,
Greetings from Computer and Medical Informatics Chapter of the IAP!
Although it's late to wish Diwali, I believe that every day of one's life should be celebrated as Diwali. Lots of Diwali Wishes today and for the rest of the days of your life. Enjoy each day with mobile free time with family and friends!



This is our 3rd CPU this year and I again thank Dr. Samir Shah and Dr. Manoj Ambwani for bringing out this wonderful edition of CPU. I also thank all the contributors who have spared their valuable time to enrich the members with the articles.

Our chapter has finished the job of "Go Green" initiative assigned to it by Indian Pediatrics Journal and the database is now maintained meticulously by the Indian Pediatrics Journal Office. Till now, we have received 10,193 requests from members of CIAP, out of which 7066 members have opted for hard copies and 3127 members have opted for soft copies. The members who have not responded have been given benefit of soft copies. Those of you who have not yet given option can do so by clicking on link <https://goo.gl/dYAC68>

I must compliment and congratulate Dr. Jeeson Uni who has almost single headedly managed the Drug Formulary for the last 14 years with regular updates every 3 months. Requires real dedication and stamina. Exemplary indeed.

The 11th National conference of CMIC of the IAP is at Kolkata on 8th and 9th of December 2018 along with West Bengal Pedicon 2018. Dr. Pallab is working very hard to make this conference a success

Dear friends, each one of us is born with immense potential. It's upon us as how we utilize this potential gifted by God. My sincere request to all the members is to contribute in whatever you can for the society and associations.

The more you give of yourself, the more you will get FOR yourself

Dr. Sanjeev Goel

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Editor : Dr. Manoj Ambwani

**Society Registration NO : Gujarat/3194/Vadodara
Public Trust Registration NO : F/2878/Vadodara**

DigiLocker App

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DigiLocker, as the name suggests, is the Digital Locker launched by the Department of Electronics & Information Technology (DietY), under the Ministry of Communications & IT. DigiLocker is a cloud storage and is one step forward towards dream of **Digital India**.



What is DigiLocker?

This is a secured personal online storage space where you can store your documents. The service is open to all Indian citizens with Aadhaar cards. Each citizen, when registered with DigiLocker, will be allotted a storage space of 1 GB linked with his or her Aadhaar number. You can not only store your official documents like mark sheets, Pan cards, Passports, certificates, voter id cards, etc. but also store Uniform Resource Identifier (URI) link of the e-documents issued by various departments. You can digitally sign e-documents with the e-sign facility provided by this system.

DigiLocker – Imp Points for Sign Up

1. DigiLocker can be accessed only if you have Aadhaar Card.
2. Registration is only possible through Mobile No and Email linked to Aadhaar Database. If your email and mobile number have changed then you should get it changed in Aadhaar Database before you sign up for DigiLocker.

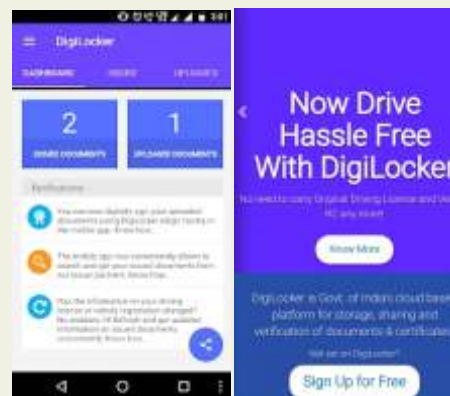
How can I get DigiLocker account?

Signing up for DigiLocker is very easy - all you need is your mobile number.

- Your **mobile number** will be authenticated by sending an **OTP** (one-time password) followed by selecting a username & password. This will create your DigiLocker account.
- After your DigiLocker account is successfully created, you can voluntarily provide your **Aadhaar number** (issued by UIDAI) to avail additional services.

DigiLocker App is available for Android and Apple phones.

The first three screens of the DigiLocker App



Driving without your physical original driving licence and registration book of your car or two wheeler

1. The driving licence is downloaded in the App from the Ministry of Road Transport and Highways, All States. This is by entering the driving licence number only. The downloaded Driving licence shows all the details as shown in the physical licence. This is a valid driving licence whenever asked by a traffic policeman.



2. Even in the travel in Railways or Airport, your identity proof in the form of Aadhaar Card or Driving Licence is valid by showing the same on your mobile.
3. Also you can safely download and save all your New India Assurance Health policies, motor insurance, travel insurance etc

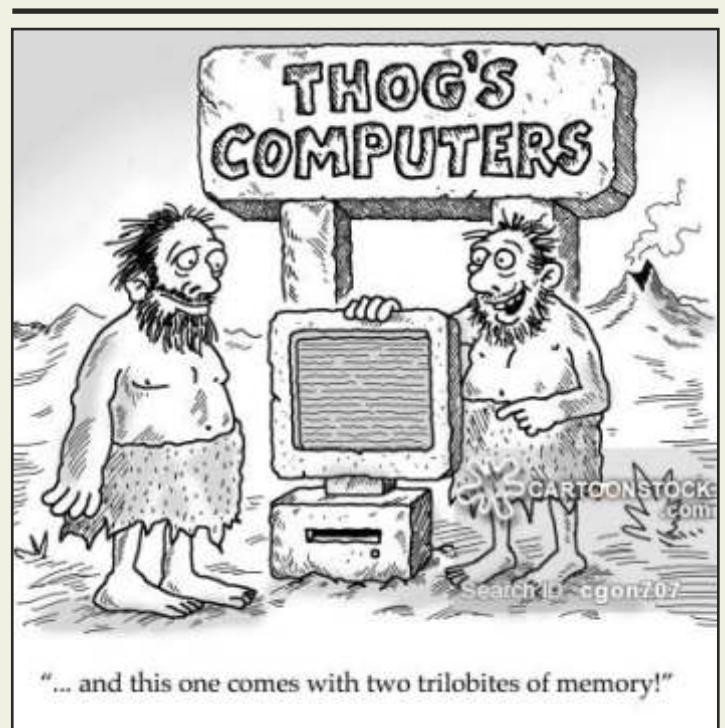
An advertisement for New India Assurance Co. Ltd. It features a central circular menu with icons for "RURAL INSURANCE", "MOTOR INSURANCE", "HEALTH INSURANCE", "MICROFINANCE INSURANCE", "TRAVEL INSURANCE", and "OUR OTHER PRODUCTS". Below the menu, it says "The New India Assurance Co. Ltd Insurance Policies Now Available in DigiLocker". There is a "Get Now" button. At the bottom, it says "DigiLocker is Govt. of India's cloud based platform for storage, sharing and verification of documents & certificates." and "Not yet on DigiLocker? Sign Up for Free".

4. Pan number and official download from The Income Tax Department, Government of India.
5. You can download all your marksheets and certificates from different state boards

An advertisement for DigiLocker. It says "More than 20 crore educational certificates are now available on DigiLocker". Below this, it lists various boards: "(CBSE, CISCE, MBSHSE, BSEB, JAC, BSEAP, BSEH, NIOS, CGSSE, BSE0, PSEB, UPMSP, DGCERT, BRAOU)". At the bottom, it says "Digital Essentials" and "www.digilocker.gov.in".

6. You can also scan and upload all your important documents.

Really amazing service and a step towards Digital India initiative by our beloved Prime Minister Narendra Modi.



How your computer connects to the Internet

Compiled by
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(Purpose of this article is to prime everybody about the vulnerabilities that we have when we connect to the internet either through the computer or through the mobile. This is important to know, for without realization of these susceptibilities, we are not motivated to do anything to rectify it.

(Looking at Ransomware going wild in its prowl, it is high time that we should strengthen our cyber-security skill to protect our valuable data.)

As humans, we've evolved to spot threats and protect ourselves and our loved ones from danger. It's coded in our DNA. It's part of our survival instinct. But we've only had a short, few years to train ourselves to detect online threats. And most of them aren't even visible, as I've said before.

So, what can we do to become better at spotting and blocking cyber threats?

Let's start with listing a few things happening on your computer right now that are all using your Internet connection.

First, you have all the ways in which your PC communicates with websites, servers and apps using the Internet. This includes your cloud storage accounts, your email, your apps, your browsers, your software updates, your operating system and more. They all connect to the web to send and receive data and make sure that your PC runs smoothly and does what you want it to do.

While pondering on this, I realized that I can't even remember the last time I used my laptop offline. That's one more reason to care about my next point.

Second, you have your **personal data that flows back and forth, to and from your computer.**

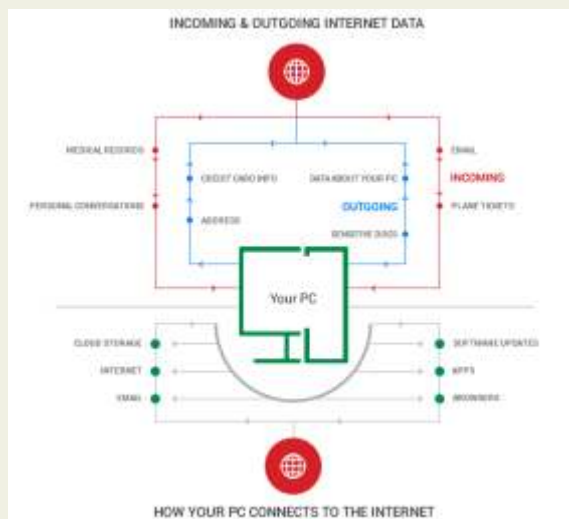
A quick, top-of-mind list would look like this:

Outgoing data :

- Credit card information
- Passwords
- Emails (work-related and personal)
- Personal documents (diplomas, IDs, contracts, etc.)
- Home address
- Phone number
- Google searches
- Browsing habits (collected through browser cookies)
- Information about your computer (type of device, model, etc.)
- Location, etc.

Incoming data:

- Plane tickets
- Personal conversations via instant messaging apps
- Hotel bookings
- Confidential documents and contracts
- Bills
- Medical records, etc.



When a **cyber-attack hits your computer**, cyber criminals will want to find a security hole in one of your apps so they can get to the good part: **your data**, either incoming or outgoing. And, as you've already inferred from the lists above, there is a lot about you that cyber criminals can learn and use. No one wants certain details made public or sold on the Dark Web.

Your browser, the attackers' favorite target

You may not know or realize this, but cyber criminals use browsers as their main way into your PC. Here's how they do it:

1. First, they infect websites that redirect you to malicious domains hosting exploit kits such as Angler;
2. Next, they use those exploit kits to scan your browser for vulnerabilities (if it's out of date and has a flaw they can exploit, if your plugins are outdated and can be compromised, etc.);
3. Once they find a way in, they can gain administrator rights, which gives them the chance to both download and extract data from your PC.



And browsers do have vulnerabilities. Here's a quick table that shows how many vulnerabilities the top 3 browsers had in 2015 and what the current situation is in terms of versions used by people all over the world:

Browser	CHROME	FIREFOX	INTERNET EXPLORER
Vulnerabilities (2015)	187	178	231
Market share	69%	18.6%	6.2%
Users that have the latest version installed	0.7%	0.2%	0.9%
Users that have older versions installed	68.3%	18.4%	5.3%

The problem here is that most users still run old versions of software, especially browsers, as you can see in the numbers above. **These older versions are more insecure and most of their vulnerabilities are public.** Which means that cyber criminals exploit them freely and constantly.

Cisco's Annual Security Report highlights the importance of browser security for both home users and companies:

"Because infected browsers are often considered a relatively minor threat, they can go undetected or unresolved for days or even longer—giving adversaries more time and opportunity to carry out their campaigns."

And there's yet another threat to consider: malicious browser add-ons.

So, it's not enough that you may be using an outdated browser or insecure plugins. You can also be plagued by insidious browser extensions that monitor your online behavior and send data about them (and your PC).

"Malicious browser extensions can steal information, and they can be a major source of data leakage. Every time a user opens a new webpage with a compromised browser, malicious browser extensions collect data. They are exfiltrating more than the basic details about every internal or external webpage that the user visits. They are also gathering highly sensitive information embedded in the URL. This information can include user credentials, customer data, and details about an organization's internal APIs and infrastructure."

"Multipurpose malicious browser extensions are delivered by software bundles or adware. They are designed to pull in revenue by exploiting users in a number of ways. In an infected browser, they can lead users to click on malvertising such as display ads or pop-ups. They can also distribute malware by enticing users to click a compromised link or to download an infected file encountered in malvertising. And they can hijack users' browser requests and then inject malicious webpages into search engine results pages."

"Enjoy the web responsibly and safely" would be my advice for anyone going online for the first time. But it's also true for anyone who's already using it.

So, let me share a list of 6 tools that can help you filter your Internet traffic and eliminate some of the threats you can't block by yourself.

1. **Use a VPN**
2. **Setup a proxy**
3. **Turn your firewall on**
4. **Install a reliable Anti-virus**
5. **Encrypt your data**
6. **Take regular Backups**

Safe use of Debit/Credit Cards- A modern day need

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The shopping scene has changed over last few years especially after demonetization. I was one of the persons propagating use of cards to many of my reluctant friends. Now that most of us have started using the cards for online shopping and offers, there is a need to understand how to use these cards safely. In this short article I will share some practical tips on using the debit and credit cards. The disclaimer here is that I also do not follow many of the tips, what I have penned down, but aim to do that soon after the article

Have just one debit and one credit card. People will try to sell credit cards to you explaining many features. Don't be lured. The advantages they offer are very minimal. Most of the times with online offers, you tend to spend extra

1. It's a good idea to have a debit card linked to an account, where you should not put more than 50,000 balance. Very rarely you will require to withdraw cash and do online shopping of more than 50,000. Even if you do, you can plan in advance and refill the account. What are friends for, you can always borrow from cash rich friends.
2. Most of the credit cards come with huge limit of 5 lac plus. That means in a month, you can spend 5 lacs on credit. Write to the card issuing company and reduce the

limit of card. How many of us do really require so much. With the kind of pediatric practice we are recently experiencing,, I am sure this number will reduce further.

3. Managing cards

- a. Each card has 4 main information which needs to be entered while shopping. Name, Card number, expiry month and year, and CVV number. For internet shopping you require all 4 information. For merchant outlets none of the above. Just PIN
- b. RBI has mandated replacement of magnetic strip cards with chip cards. Replace your magnetic card with chip cards. It will chip in more security
- c. ERASE THE CVV NUMBER WITH SHARP KNIFE. Remember to note this CVV number and write it somewhere. ONCE LOST, THIS CVV NUMBER CAN'T BE RESTORED AND YOUR CARD NEEDS TO BE REPLACED. I personally erase the CVV number and with a marker pen write a code to remember this CVV number. Demonetization is teaching us to sharpen ourselves
- d. When using cards at the merchant outlets, never let your card go out of your vision. Most people now use portable swipe machines. Some petrol pump owners keep the swipe machine in their offices. Accompany your card to the office, even it means walking much needed few steps.
- e. Never give your card details, to anyone. You can quote my article to avoid most often misuse of card at home. Anyone means anyone. No exceptions. You guessed it right.
- f. Never give OTP to anyone on phone. People will trick you to believe that they are genuine bank people. Mistrust must be total
- g. Disable international use of your card by logging into your net banking. Most of the internet misuse of

cards happen outside India. You can always enable international use when you go out of country, though preferable is prepaid forex cards for international travel. Why do you want to use your hard earned "bank" money when travelling abroad? Instead use hard saved b***k money

- h. Set limits to daily and monthly usage. You can always use the option of limiting the maximum amount which can be used daily or monthly via internet banking. It will be a good exercise to practice setting limits
- i. While using internet use the private, incognito function of the browsers. It's always advisable to be private and incognito and be safe in whatever you do.
- j. Check https in the web browser address. Wrong address will always lead to a wrong place
- k. Always use software with original keys. Updated operating system and antivirus software is must. Updating is key to success in business.
- l. Keep your mobile screen locked to prevent access to OTP, in case your mobile is stolen. Sometimes you can keep your mobile locked for the right reasons
- m. The list is long....., however I had promised to write short article, so stopping here. You can however keep disturbing me at goelsanjeev@gmail.com

Take home message:

The cards are hacked and will continue to be. Continue using your cards anyway. Government has given responsibility of fraudulent transactions to banks and you can get your money back in case of genuine misuse. However let's aim not utilise this service.



CRACKING THE CREDIT CARD CODE

The first digit is the **Major Industry Identifier**. It designates the category of the entity which issued the card.

1 and 2 are Airlines,
3 is Travel and Entertainment
Identification Number. It will identify the institution that issued the card.

Visa: 4xxxxx
Mastercard 51xxxx - 55xxxx
Discover: 6011xx, 644xxxx, 65xxxx
Amex: 34xxxx, 37xxxx

Cards can be looked up by their IIN
A card that starts with 376211 is a Singapore Airlines Krisflyer
American Express Gold Card.
529962 designates a pre-paid Much-Music MasterCard.

The 7th and following digits, excluding the final digit, are the person's account number. This leaves a trillion possible combinations if the maximum of 12 digits is used. Many

How to Validate a Credit Card With Your Mind

Take the above number (or any credit card number)

4417 1234 5678 9113

And double every other digit from the right.

4	4	1	7	1	2	3	4	5	6	7	8	9	1	1	3
	x2		x2		x2		x2		x2		x2		x2		x2
8	2	2	6	10	14	18	2								

Add these new digits to undoubled ones.

4 7 2 4 6 8 1 3

All double digit numbers are added as a sum of their digits, so 14 becomes 1+4.

8+4+2+7 + 2+2+6+4 + 1+0+6+1+4+8 + 1+8+1+2+3

=70

If the final sum is divisible by 10, then the credit card number is valid.
If it's not divisible by 10, the number is invalid or fake. Try it and see.

by Jess Net
mint.com/blog

UpToDate : Must Have App for Paediatrician

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Why UpToDate

- Over 15 Lakh clinicians worldwide and 90% of teaching medical institutions in the United States trust UpToDate to make the best care decisions.
- As the only clinical decision support resource associated with improved outcomes, UpToDate is an investment in patient care. More than 80 research studies demonstrate its impact on improved patient care and hospital performance.
- Original clinical content evaluated by More than 6,700 physician authors, editors, and peer reviewers resulting in best evidence-based recommendations.
- Accepts no advertising or sponsorships, a policy that ensures the integrity of content and keeps it free of commercial influences.
- Answers....Fast: A format that can be quickly and easily accessed at the point of care. Each topic in UpToDate is designed to make it easy to find the information you need when you need it.
- Mobile Access: Award-winning UpToDate Mobile Apps put graded, evidence-based recommendations right at the point of care.
- Adds Value, Saves Time: Incorporates drug interactions, medical calculators, patient education materials and more.

Features of UpToDate

- **Mobile Apps:** With an individual subscription or UpToDate Anywhere, users can access UpToDate clinical decision support on the go from any mobile browser or UpToDate Mobile Apps, available in iOS and Android.
- **What's New:** The "What's New" notifications provide clinicians with a summary of, in our editors' view, the most important new information added to the medical

literature in recent weeks to topics they've previously read.

- **Practice Changing Updates:** This section highlights specific recommendations and/or updates that we anticipate may change clinical practice. UpToDate will notify clinicians when a topic they've previously read has been impacted by a Practice Changing Update.
- **Patient Education:** UpToDate includes more than 1,500 corresponding patient information topics, plus more than 1,000 in universal Spanish. Clinicians can review this information with patients in the exam room, print out as handouts, or send via email.
- **Graphics Search:** This powerful search engine feature allows subscribers to search tens of thousands of pictures, charts, movies, illustrations and more – all without ever leaving UpToDate.
- **Medical Calculators:** UpToDate includes calculators to help you quickly and accurately calculate many different medical measurements.
- **Drugs & Drug Interactions:** Clinicians can quickly check for possible drug-to-drug and drug-to-herb interactions with the UpToDate drug interactions program (in partnership with Lexicomp®).
- **Content Sharing:** Sharing UpToDate® clinical content and graphics helps clinicians educate their patients and students. UpToDate users can email or print clinical topics or any visual from our library of over 27,000 richly detailed medical graphics, right from UpToDate. Clinicians can also share free patient information articles, "Beyond the Basics," via email and social media.
- **Creating a presentation?** You may export medical graphics from UpToDate directly into Microsoft PowerPoint.

Alternatives of UpToDate

Features	UpToDate	Dynamed	Medscape
Topics Covered	> 11,000	> 3,200	> 6,300
Updates	Quarterly	Weekly	?
Depth	Comprehensive explanation	Just the evidence, quick to the point approach	Less
Bias	No	No	Yes

How to Access UpToDate:

Your experience will be optimized, whether accessing UpToDate from a desktop computer, tablet, or mobile device.

MobileWeb: Nothing to install. The user friendly website is designed to responsively adapt to mobile devices, such as smartphones and tablets. Simply open the browser on your mobile device, go to www.uptodate.com and click login. You will find a consistent experience across all mobile platforms that is optimized for small screens and tablets and easy to navigate.

Mobile App: Individual subscribers and registered UpToDate Anywhere users may install the UpToDate Mobile Apps on up to two devices free of charge.

UpToDate MobileComplete: All the same great features – accessible without a Wi-Fi or network connection. This feature is available to individual subscribers. Organization level Subscribers have to check for availability of this option.

(Wi-Fi access is required for initial UpToDate MobileComplete download and full content updates. A minimum of 1.3 GB of local storage is required for both topics and graphics; 400MB of local storage is required for topics only.)

UpToDate Subscription:

- Below mentioned prices are in USD.
- Subscription terms longer than 30 days include a risk-free 60-day money-back guarantee. No refunds after 60 days or for any other subscription terms.

Role	7 Days	Monthly	1 year	2 years	3 years
Students and Residents	----	15	149	279	----
Professional	----	40	419	749	999
Group of 2-5	----	-----	389	749	939
Group of 6-10	----	-----	369	699	899
Patient and Caregiver	20	53	----	----	----

Tips for Trial: UpToDate subscription is not free, so you may adapt one of following method to have free trial

- Request existing individual subscriber to email guest pass, you can use it free for 30 days. Individual subscriber can do this only once.
- UpToDate offers a 60-day money back guarantee with annual or longer subscriptions. No refund is granted

after 60 days of subscription. So you may subscribe for 1 year and then may cancel subscription before 60 days if not willing to continue.

Tips for Cutting Cost:

As UpToDate is not a free subscription, you may cut the cost of application by adopting one of the method suitable to you:

- Share mobile application with one of your friends as Individual subscribers and registered UpToDate Anywhere users may install the UpToDate Mobile Apps on up to two devices free of charge.
- Subscription for students is much cheaper, so.....
- Subscribe for longer time, longer the subscription, cheaper the plan.
- Have a group of 6-10 persons for subscription.

UpToDate® Advanced™ : gives you access to UpToDate® Pathways' interactive algorithms that connect all the evidence with individual patient's factors, and Lab Interpretation™ monographs designed to support the quick and accurate interpretation and management of abnormal test results. You can benefit from this innovative level of clinical decision that helps you streamline care and improve patient outcomes. Not much of Pediatric content is available in UpToDate® Advanced™, so I would recommend not to subscribe as it costs extra amount.

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PEDICON
2019 Mumbai

I A P
INDIAN ACADEMY OF PEDIATRICS
MUMBAI

DON'T MISS
CMIC CHAPTER PROGRAM
On DAY 4
10/02/2019
Between
9.00 am to 10.25 am
In
Hall F

Point of care testing in OPD practice – My experiences

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I am a pediatrician practicing in an OPD setting in a suburb of Chandigarh.

In my practice, I have found point of care testing (POCT) to be quite useful in diagnosing and treating children..

What do I mean by POCT?

It simply means tests that I do with a fingerprick whole blood sample that provides screening results in my OPD within a few minutes. These are used to make immediate treatment decisions.

What tests do I do?

I do the following tests; Hb, TLC& DLC, card tests for Dengue (Ns1 Ag, IgG & IgM antibodies), Typhoid ELISA (ENTEROCHEK), and Malarial Ag. Also Urine dipstick for Leucocyte esterase & nitrite for UTI.

What are the benefits of POCT?

The important benefits include fast results, accurate screening tests, actionable changes in treatment, preventing antibiotic abuse. Equally important, parental apprehension of venepuncture in kid, traveling outside the doctor clinic for tests, waiting for hours for reports etc. is avoided. Also, earnings multiplied and I can charge premium for the convenience.



What are the practical aspects of implementing this in OPD setup?

The space needed for equipment is very small, just around 1 foot by 1 foot. Staff can easily be trained to handle the testing & equipment within days. Since we run a 'dry' lab, there is no manipulation of the blood sample, just a drop of blood is collected and microcurvette or the pipette sucks out the blood easily from the finger itself. Since we need to give printouts of the reports, the staff clicks a photo and sends it on WhatsApp to the computer which has web access to WhatsApp, from where a printout of the reports is taken.

What are the challenges / potential problems with POCT?

Limited number of tests can be done as we are using whole blood and only doing finger prick testing. Accuracy of the results can vary depending on the kit used, and card tests may be less reliable than more expensive lab based tests. Some doctors are concerned about the medicolegal implications of doing tests in the clinic, but this is no different from checking blood sugars or any other bedside tests. In fact, since the samples are in a controlled environment the chances of false tests is actually reduced. Some states like Punjab require that all dengue tests be confirmed in the State designated lab. I ask in writing to the parents to visit the designated lab. Finally monitoring of disease like Dengue will still require going to a regular lab as platelets cannot be done.

There are challenges to the workflow, and the patient sometimes needs to wait for a few minutes for the test results while the next patient is being examined. If more than 1 patient needs to be tested, the waiting time may go up. Samples need to be marked accurately.

Future tests that I am planning to add

I am looking at Vit D levels & H. Pylori testing in the near future. Also, stool test for Rotavirus antigen is being planned.

Final words

I really enjoy the additional diagnostic information available to me within minutes – it has become a part of my detailed clinical examination in many situations.

Parents are really apprehensive about venepuncture and also about going to an outside lab for basic fever workup; their trust is reinforced by results being done in house. Finally, the quick results allow me to take scientifically informed decisions with improved accuracy.

Clinical profile	Question / Issues	Result	Action
Abhi, 4 year old child came with 2 days h/o fever, now peaking at 104 F, at 830 PM, Parents panicking about Dengue / serious infection.	OPD labs closed at this time. Hospital labs will give report after 2 hours, meaning that I would be awake and counseling the parents at midnight.	Counts – 8400 with 64/28/ 6/2/0 Typhoid, Dengue & Mal Ag Negative Urine Negative	Reassured parents about likely Viral infection. Next morning phone call revealed child's fever is reducing. Antibiotics avoided
Shruti 2.5 yr old has H/o Pica for a few weeks	Parents apprehensive about venepuncture How long to give iron, & will it work?	Hb 9.2 Rpt Hb after 1 month 11.0	Increasing trend of Hb reassured parents, and pica habit gradually diminished as well
Kamlesh 5 yr old girl from low Socioeconomic status has h/o fever * 15 days.	Parents have done tests from lab of doubtful accuracy with nonspecific results, not keen on going out for further tests – costs also a concern	Testing revealed strongly Positive ELISA for Typhoid (ENTEROCHEK) Counts 3000 with 40/55/3/2/0 Dengue & Malaria Neg	Clinical suspicion of Typhoid confirmed within 5 minutes, Blood c/s & Widal suggested – Antibiotics started.

Clinical profile	Question / Issues	Result	Action
Inder, 7 yr boy with h/o high fever and severe body aches for 3 days during monsoons, mild non specific macular rash on the body, H/o fever in father and mother also in the last week – now improving	Is it Viral or Dengue – given the epidemic of dengue going on?	Dengue ns 1 Ag: Strongly Positive TLC 1800 with 35/57/6/2/0 Parents tested – both tested positive for Dengue as well!	Increased fluid intake and PCM suggested, NSAIDs & Antibiotics avoided. F/u with Platelet count in lab recommended.
Gauri, 6 years old with h/o recurrent URI – usually given antibiotics by parents – since this is what the doctor does – comes with high fever 102 f for 2 days with typical runny nose and cough and some body aches, mild throat congestion	Parents want to give Antibiotics as always ... to ‘prevent’ complication of Viral infection...	TLC 6500 with 45/50/ 5/0/	Counseled about likely viral nature of illness, Parents agree to go with a prescription of ‘delayed’ antibiotics, child improves the next days with fever reducing and a rash visible s/o viral exanthema – Antibiotics avoided
3 year old Poorvi with dribbling urine for 2 days with mild fever	Is it UTI?	Urine dipsticks reveal 3 + leucocytes & 2 + nitrates with some proteins and blood traces as well	Clinical suspicion of UTI appears to be confirmed, Urine sent for r/e & c/s – antibiotics started within minutes of seeing the child
Ganesh 4 yr old boy with fever upto 102 F * 3 days with some bodyaches, no significant cold or cough. Looks a little unwell	Is it viral or bacterial, given lack of viral syndrome or any focus, are antibiotics scientifically indicated?	TLC 18,000 with 88/7/5/0	High TLC above 15,000 along with Low ANC below 1500 is suggestive of Bacterial Infection. Broad Spectrum Antibiotics Started

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