IRPHACON 2014
Public Health Challenges in Indian Railways

15th Annual Conference of Indian Railway Public Health Association & 44th Annual Scientific Seminar & CME Programme of Indian Railway Medical Service Association
Eastern Railway, B.R. Singh Hospital

16th & 17th January, 2015

Indian Railway Medical Service Association
Eastern Railway
### PROGRAMME of 16th January 2015 (Friday)

<table>
<thead>
<tr>
<th>Period</th>
<th>Topic</th>
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<tbody>
<tr>
<td>8.00 hrs - 9.00 hrs</td>
<td>Breakfast &amp; Registration</td>
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<tr>
<td>9:00 hrs to 9:30 hrs</td>
<td>Free Paper Session - I</td>
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<tr>
<td>09:30 hrs to 10:55 hrs</td>
<td>Public Health Session - I</td>
</tr>
<tr>
<td>11:00 hrs to 11:25 hrs</td>
<td>Guest Lecture</td>
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<tr>
<td>11:30 hrs to 13:00 hrs</td>
<td>Orthopedics Session - Howrah Orthopedic Hospital</td>
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<tr>
<td>13:00 hrs to 13:45 hrs</td>
<td>Lunch</td>
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<tr>
<td>13:45 hrs to 15:10 hrs</td>
<td>Public Health Session - II</td>
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<tr>
<td>15:15 hrs to 16:15 hrs</td>
<td>Free Paper Session - II</td>
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<tr>
<td>16:20 hrs to 17:05 hrs</td>
<td>Public Health Session - III</td>
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<tr>
<td>17:15 hrs to 18:00 hrs</td>
<td>IRPHA GB Meeting Followed by Tea Break</td>
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<tr>
<td>14.30 hrs to 17.30 hrs</td>
<td>River Cruise for Family Members &amp; Spouses of Guests</td>
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<tr>
<td>18.00 hrs to 19.00 hrs</td>
<td>Inauguration</td>
</tr>
<tr>
<td>19.00 hrs to 20.30 hrs</td>
<td>Cultural Programme</td>
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<tr>
<td>20.30 hrs</td>
<td>Dinner</td>
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### PROGRAMME of 17th January 2015 (Saturday)

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<td>9.00 hrs - 10.00 hrs</td>
<td>Free Paper Session</td>
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<td>10.00 hrs - 10.15 hrs</td>
<td>Scientific Session</td>
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<tr>
<td>10.20 hrs - 10.40 hrs</td>
<td>Dr. CR Kundu Memorial Oration</td>
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<td>10.45 hrs - 13.30 hrs</td>
<td>Scientific Session</td>
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<td>13.30 hrs - 14.15 hrs</td>
<td>LUNCH</td>
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<td>14.15 hrs - 14.50 hrs</td>
<td>Scientific Session</td>
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<tr>
<td>14.55 hrs - 15.35 hrs</td>
<td>Panel Discussion: OBESITY - A Lifestyle Disease</td>
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<td>15.40 hrs - 16.10 hrs</td>
<td>VALEDICTORY &amp; LUCKY DIP</td>
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<td>16.10 hrs - 16.30 hrs</td>
<td>TEA</td>
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<tr>
<td>18.30 hrs - 20.30 hrs</td>
<td>Cultural Programme : Drama</td>
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<td>20.30 hrs</td>
<td>Dinner with Musical Programme</td>
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15th Annual Conference of Indian Railway Public Health Association
IRPH ACON 2014
&
44th Annual Scientific Seminar & CME Programme
of Indian Railway Medical Service Association

Chief Patron : Shri R.K. Gupta, GM/E.Rly
President : Dr. Jnanaranjan Swain, CMD/E. Rly

Executive Committee

Vice President : Dr. A. Chakraborty
Dr. Shyam Sunder
Dr. P. Kuili
Dr. Gopa Sinha
Dr. Gautam Dasgupta
Dr. S. Kumar
Dr. Tapas Majumdar
Dr. R. Bhattacharya
Dr. B. Ghatak

Advisory Committee : Dr. Amitava Dutta, ACMD (H&FW)/HQ
Dr. Amit Basu, ACHD/BRSH
Dr. Milan Majumdar, ACHD/BRSH
Dr. C. Pathak, ACMS/HWH

Organising Secretary &
Chief Coordinator Dr. Sujit Mallik, ACMD/TA/E.Rly
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Dr. C. Pathak, ACMS/HWH
Asstt. Secretary : Dr. AHOs of HQ, HWH, SDAH
Treasurer : Dr. A. Sett, Dy. CMD/MS/E.Rly
Asstt. Treasurer : Dr. Ashok Saha, ACHD/Anaes/BRSH
Scientific Secretary : Dr. Subhasis Das, ACHD/BRSH
Dr. C. Pathak, ACMS/HWH
Dr. P. S. Mitra, Sr. DMO/ASN

Stage Management : Dr. S. Guha/Sr. DMO/HWH
Dr. D. Choudhury/Sr. DMO/HWH

Souvenir : Dr. D. Guha/Sr. DMO/ENT/BRSH

Anchor : Dr. Arnav Mitra, Sr. DMO/BRSH

Reception Committee : Dr. Siddhartha Ghosh, Sr. DMO/HWH
Dr. M. Majumdar, Sr. DMO/HWH
Dr. Soumita Kundu, ADMO/E.Rly/HWH
Dr. S. Gaiyatat, ADMO/HWH

Accommodation, Logistics & Tour Management : Dr. A. Dutta, ACM/H&FW/E.Rly
Dr. M. K. Mahanty, ACMS/G/HWH
Dr. A. Sett, Dy. CMD/MS/E.Rly
Dr. Sanjeev Chowdhary, Sr. DMO/H&FW/BRSH

Catering Secretary : Dr. Subhankar Home, ACHD/BRSH
Dr. Milan Majumdar, ACHD/BRSH

Cultural Secretary : Dr. A. Chattoraj, Sr. DMO/HWH
Dr. Arnav Mitra, Sr. DMO/BRSH
Dr. Mandira Banerjee, Sr. DMO/Metro

Secretarial Assistance : Clerical Staff of Orthopaedic Hospital and AHOs/HQ, HWH, SDAH
15th Annual Conference of Indian Railway Public Health Association
IRPH ACON 2014
&
44th Annual Scientific Seminar & CME Programme
of Indian Railway Medical Service Association
Eastern Railway, B.R. Singh Hospital

Sub-Committee

A. Transport, Logistics & Accommodation Committee
In Charge & Chief Coordinator: AHO/HWH, CHI/HWH
Other Members: On Duty HIs of HWH

B. Reception Committee plus Bouquet Presentation at Howrah
In Charge & Chief Coordinator: Dr. Rupa Mukherjee, ACMS/BWN ANO/HWH
Other Members: Selected Nursing Staff

C. For Hospitality of VIPs
In Charge & Chief Coordinator: Dr. Champak Biswas, ACMS/LLH AHO/HWH, CHI/HWH
Other Members: On Duty HIs of HWH & SDAH Stn.

D. Stage Management Committee (Riviera, Howrah)
In Charge & Chief Coordinator: CHI/HWH, Section Engineer/Engg.
Other Members: On Duty HIs of HWH

E. Audio visual Committee at Howrah & BRSH
In Charge & Chief Coordinator: CHI/HWH, Section Engineer/S&T
Other Members: On Duty HIs of HWH

F. Mementos & Gifts at Howrah & BRSH
In Charge & Chief Coordinator: Mr. S.K. Mondal, AHO/HQ
Other Members: Staff of H & FW of HQ & HWH

G. Announcements & Compere at Howrah & BRSH
In Charge & Chief Coordinator: Dr. Arnav Mitra/Sr. DMO/BRSH
Other Members: DEE/H&FW/HQ
H. Scientific Committee
   In Charge & Chief Coordinator: Dr. Subhasis Das, ACHD/BRSH
   Dr. C Pathak, ACMS/HWH
   Dr. P. S. Mitra, Sr. DMO/ASN
   Other Members: B. Mani/HI/HWH
I. Technical Support (Audio Visual Aids & Equipments)
   Dr. Avik Das, Sr. DMO/MLDT
   Section Engineer/S & T
J. Invitation In-Charges (HQ, HWH)
   Dr. Sujit Mallik
   Dr. Saradindu Roy, ACMS/LLH
   Dr. Subhro Kanti Dutta, Sr. DMO/BRSH
K. Souvenir Committee
   In Charge: Dr. D. Guha, Sr. DMO/BRSH
              Dr. Sur Roy, ACMS/HWH
L. Food & Refreshments (HWH)
   In Charge & Chief Coordinator: Dr. Subhankar Home, ACHD/BRSH
   Dr. Milan Majumdar, ACHD/BRSH
   Dr. K.K. Roy, ACMS/HWH
M. Cultural Program
   In Charge & Chief Coordinator: Dr. A Chattoraj, Sr. DMO/HWH
   Dr. Arnav Mitra, Sr. DMO/BRSH
   Dr. Mandira Banerjee, Sr. DMO/Metro
   Dr. Nayan Mani Das, ADMO/BRSH
N. Outdoor Visits of Delegates
   In Charge & Chief Coordinator: Dr. Satyendra Kumar, Sr. DMO/BGP
   Dr. Nayan Mani Das, ADMO/BRSH
   Other Members: HI/HQ, Field Worker/Hd. Qtrs.
O. Trade Exhibition
   In Charge & Chief Coordinator: Dr. J. Mukherjee, ACMS/HWH
   Dr. S. Bhawal, ACMS/JMP
P. Arranging EQ for waitlisted Delegates:
   In Charge: Dr. Anupam Sett, ACM/BRSH, Dr. A Sanyal, ACMS/FP
   Assistance: Shri Biswajit Chowdhury, AHEO/Hd. Qtrs/E.Rly
Q. Registration:
   Shri Biswajit Chowdhury, AHEO/Hd. Qtrs/E.Rly
IRMSA
B. R. Singh Hospital, Eastern Railway, Seal Road

Executive Committee for the year 2014-15

President: Dr. Shyam Sunder, MD/BRSH
Vice President: Dr. Gopa Sinha, CMS/SDAH
Dr. A. Das Choudhury, CS/I
Dr. Tarun Choudhuri, CS/II
Dr. Alok Majumder, CS/III

Secretary: Dr. Amit Basu, ACHD/G & O
Joint Secretary: Dr. Srabani Basu, ACHD/Anaes
Dr. Debasish Guha, Sr. DMO/ENT

Asstt. Secretary: Dr. Gautam Ray, Sr. DMO/P
Treasurer: Dr. Ashok Saha, ACHD/Anaes
Asstt. Treasurer: Dr. Sanchita Datta, ACHD/OPD

Scientific Secretary: Dr. S. Das, ACHD/R
Dr. S.K. Dutta, Sr. DMO/G & O

Information & Publicity: Dr. D. Bandopadhayay, ACHD/Paed
Dr. B.N. Dhar, ACHD/Gynae
Dr. Arnab Mitra, Sr. DMO/Eye

Cultural Secretary: Dr. Angira Dasgupta, DMO/P
Dr. Chayan Bhattacharya, DMO/Anaes

Advisory Committee: Dr. S.C. Kundu
Dr. A.K. Basu
Dr. A.N. Basu Mallick

Executive Committee Members: Dr. Sarbani Sengupta, ACHD/P
Dr. Tarun Banerjee, ACHD/Cas
Dr. D.R. Das, ACHD/Surg
Dr. Milan Majumder, ACHD/Surg
Dr. S. Home, ACHD/Eye
Dr. Anupam Sett, DyCMD/HQ
Dr. Rana Bhattacharya, ACHD/Nephro
Dr. Indira Jha, ACHD/ITU
Dr. Tirthankar Chakraborty, ACHD/Surg
Dr. C.M.S. Lee, ACHD/G & O
Dr. A. Santra, Sr. DMO/Surg
MEDICAL PERSONNEL OF B.R. SINGH HOSPITAL

A. Administration
1. Dr. Shyam Sunder, Medical Director
2. Dr. (Mrs.) Gopa Sinha, CMS/SDAH
3. Dr. Ananda Daschowdhury, C.S.I
4. Dr. Tarun Choudhury, C.S.II
5. Dr. Alok Mazumdar, C.S.III
6. Dr. B. C. Ray, ACHD(Admn)

B. Department of Outdoor Patients
1. Dr. (Mrs.) Sanchita Datta, ACHD/FOPD, Diploma in Geriatrics
2. Dr. S. S. Pramanick, ACHD/Physician/OPD, M.D. (Med.)
3. Dr. (Mrs.) Japamala Majumdar, ACHD/Female RELHS OPD, DNB (G&O)
4. Dr. C. R. Gayen, ACHD/Male RELHS OPD
5. Dr. Sujata Basu, ACHD/MPOD, DCH
6. Dr. S. K. Pain, CMP/Male RELHS OPD

C. Department of Casualty
1. Dr. Tarun Kanti Banerjee, ACHD/IC
2. Dr. M. Chakraborty, ACHD, DCH
3. Dr. (Mrs.) Kalpana Mondal, Sr. DMO(SG)
4. Dr. Sujata Kundu, Sr. DMO
5. Dr. Shipra Biswas, Sr. DMO(SG)

D. Department of Health & Family Welfare
1. Dr. Sanjeev Choudhary, Sr. DMO

E. Department of Pathology
1. Dr. (Mrs.) R. Mukherjee, Sr. DMO (SG)/IC, MD (Path), DTM & H
2. Dr. (Mrs.) Jayeeta Bandyopadhyay, ADMO, MD (Path)

F. Department of Radiology
1. Dr. P. K. Ghosh, ACHD/IC, M.D. (Radiodiagnosis)
2. Dr. S. Das, ACHD, D.M.R.D.

G. Department of Cardiology
1. Dr. Alok Majumder, CS III & IC-Cardiology, MD, DM (Cardiology)
2. Dr. Basudev Bhattacharya, ACHD, M.D., MRCP
3. Dr. Sanjay Ghosh, Sr. DMO
H. Department of Neuro Medicine
   1. Dr. Bhaskar Ghosh, ACHD(Neurology), Dipcard, MD, DNB, DM

I. Department of Nephrology
   1. Dr. Rana Bhattacharyya, ACHD(Nephrology), MD

J. Department of Gastroenterology
   1. Dr. Gautam Roy, Sr. DMO (SG)(Gastroenterology), M.D., D.M.
   2. Dr. S. S. Pramanick, ACHD, M.D. (Med.)

K. Department of Rheumatology
   1. Dr. Sarbani Sengupta, ACHD/P, D.C.H., MRCP

L. Department of Endocrinology
   1. Dr. Sharmistha Mukhopadhyay, Sr. DMO (SG)(Endocrinology), M.D., DNB, D.M.

M. Department of Dermatology
   1. Dr. Tarun Kanti Banerjee, ACHD

N. Department of General Medicine
   1. Dr. Sarbani Sengupta, ACHD (IC)/P, D.CH., MRCP
   2. Dr. Indira Jha, ACHD/ITU, DCH
   3. Dr. Rana Bhattacharyya, ACHD, MD
   4. Dr. A. K. Bhattacharya, ACHD, DCH, DVD
   5. Dr. Sharmistha Mukhopadhyay, Sr. DMO (SG), M.D., DNB, D.M.
   6. Dr. Gautam Roy, Sr. DMO (SG), M.D., D.M.
   7. Dr. Angira Dasgupta, DMO, MD (Pulm), DNB, MRCP, MRCPS

O. Department of Paediatrics
   1. Dr. Tarun Choudhuri, C.S.III & IC-Paediatrics, D.C.H.
   2. Dr. D. Bandyopadhyay, Sr. DMO (SG)(Paed), D.C.H., M.D.

P. Department of Chest Medicine
   1. Dr. Angira Dasgupta, DMO, MD (Pulm), DNB, MRCP

Q. Department of Surgery
   1. Dr. A. Das Chowdhury, C.S.I & I.C.(Surgery), MS
   2. Dr. Milan Kanti Mazumder, ACHD
   3. Dr. D. R. Das, ACHD
   4. Dr. T. Chakraborty, ACHD, MS
   5. Dr. S. Kanjilal, ACHD, MS, MCh
   6. Dr. A. Santra, Sr. DMO (SG), MS
R. **Department of Physiotherapy**
   1. Dr. M. K. Mazumder, ACHD (IC)
   2. Dr. S. Guha Sr. DMO (SG) (HWH), MD (Physical Medicine)

S. **Department of Anaesthesiology**
   1. Dr. (Mrs.) S. Basu, ACHD (IC), M.D. (Anaes), DGO
   2. Dr. Ashok Saha, ACHD, D.A.
   3. Dr. A. K. Roy, Sr. DMO (SG), D.A.
   4. Dr. Nilendu Chakraborty, Sr. DMO, M.D. (Anaes)
   5. Dr. Chayan Bhattacharjee, DMO, D.A., DNB

T. **Department of Gynaecology**
   1. Dr. C.M.S. Lee, ACHD/IC, MD
   2. Dr. Amit Basu, ACHD, DGO
   3. Dr. B. N. Dhar, ACHD, DGO
   4. Dr. S. K. Dutta, Sr. DMO (SG), DGO, MD(G & O)
   5. Dr. Nayan Mani Biswas, ADMO, MD (G & O)

U. **Department of Eye**
   1. Dr. Suvankar Home, ACHD/IC, M.S. (Eye)
   2. Dr. Arnav Mitra, Sr. DMO(SG), MS (Eye)
   3. Dr. (Mrs.) Debjani Mukhopadhyay, Sr. DMO, DO, DNB

V. **Department of E.N.T.**
   1. Dr. Debasish Guha, Sr. DMO(SG)/IC, DLO, DTM & H

W. **Department of Dentistry**
   1. Ranadeep Chowdhury, Sr. DDS, BDS

X. **Department of Psychiatry**
   1. Dr. (Mrs.) Jhunu Mukherjee, DMO, MD (Psy.)

Y. **Department of Oncology**
   1. Dr. M. K. Mazumder, ACHD/IC
   2. Dr. D. Guha, Sr. DMO(SG), DLO, DTM & H

Z. **Department of Urology**
   1. Dr. S. Kanjilal, ACHD, MS, MCH
### LIST OF HONORARY CONSULTANT/VISITING SPECIALISTS ATTACHED TO B.R. SINGH HOSPITAL & CENTRE FOR MEDICAL EDUCATION AND RESEARCH, EASTERN RAILWAY, SEALDAH

<table>
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<tr>
<td>1.</td>
<td>Dr. Tuphan Kanti Doloi</td>
<td>Hematology</td>
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<td>2.</td>
<td>Dr. Priyabrata Dey</td>
<td>Neuro Surgery</td>
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<tr>
<td>3.</td>
<td>Dr. Kamalendu Haldar</td>
<td>ENT</td>
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<td>4.</td>
<td>Dr. Madhuchanda Kar</td>
<td>Oncology</td>
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<td>Dr. Jyotirmoy Roy Chowdhury</td>
<td>Psychiatry</td>
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<td>Dr. Gautam Das</td>
<td>IPM (Anaesthesiology)</td>
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<td>Dr. Amitabha Mukhopadhyay</td>
<td>Gynaecology</td>
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<td>Dr. Lalit Kr. Agarwal</td>
<td>Nephrology</td>
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<td>Dermatology</td>
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<td>Paediatrics</td>
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<td>11.</td>
<td>Dr. Shyamalendu Mandal</td>
<td>Pathology</td>
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### LIST OF MEDICAL OFFICERS OF HEALTH UNITS SEALDAH DIVISION

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Medical Officers</th>
<th>Designation</th>
<th>Health Units</th>
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<tr>
<td>1.</td>
<td>Dr. T. K. Maity</td>
<td>ACMS</td>
<td>NKG</td>
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<tr>
<td>2.</td>
<td>Dr. Evelina Hansdak</td>
<td>Sr. DMO</td>
<td>CP</td>
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<td>3.</td>
<td>Dr. P.K. Chakraborty</td>
<td>ACMS</td>
<td>DKD</td>
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<tr>
<td>4.</td>
<td>Dr. K.N. Das</td>
<td>ACMS</td>
<td>KMD</td>
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<tr>
<td>5.</td>
<td>Dr. S.K. Misra</td>
<td>ACMS/IC</td>
<td>NH</td>
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<td>6.</td>
<td>Dr. Sayantan Saha</td>
<td>ADMO</td>
<td>NH</td>
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<td>Dr. Indranil Das</td>
<td>CMP</td>
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<td>8.</td>
<td>Dr. Suman Lodh</td>
<td>Sr. DMO/IC</td>
<td>RHA</td>
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<td>Dr. Sayan Mondal</td>
<td>CMP</td>
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<td>Dr. Sandip Kr. Paria</td>
<td>ADMO</td>
<td>CRE</td>
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<td>11.</td>
<td>Dr. S.K. Sarkar</td>
<td>Sr. DMO(SG)</td>
<td>KRP</td>
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<td>12.</td>
<td>Dr. Paramita Biswas</td>
<td>Sr. DMO</td>
<td>BT</td>
</tr>
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<td>13.</td>
<td>Dr. Kamalendu Mondal</td>
<td>ACMS</td>
<td>BT</td>
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<td>14.</td>
<td>Dr. Debopriya Sengupta</td>
<td>Sr. DMO(SG)</td>
<td>SPR</td>
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<td>15.</td>
<td>Dr. Subheswar Dasgupta</td>
<td>ACMS</td>
<td>GHPR</td>
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<tr>
<td>16.</td>
<td>Dr. A. Sanyal</td>
<td>ACMS</td>
<td>FP</td>
</tr>
<tr>
<td>17.</td>
<td>Dr. S. Chatterjee</td>
<td>ACMS</td>
<td>KG</td>
</tr>
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</table>
# LIST OF SR/DNB (PGT)

**B.R. SINGH HOSPITAL & CENTRE FOR MEDICAL EDUCATION AND RESEARCH, EASTERN RAILWAY, SEALDAH**

<table>
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<tr>
<th>S.N.</th>
<th>Name of the Doctor</th>
<th>Designation</th>
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<tbody>
<tr>
<td>1.</td>
<td>Dr. Trilochan Agarwal</td>
<td>DNB PGT (Med)</td>
</tr>
<tr>
<td>2.</td>
<td>Dr. Abhijeet Sharan</td>
<td>DNB PGT (Med)</td>
</tr>
<tr>
<td>3.</td>
<td>Dr. Debapratim Routh</td>
<td>DNB PGT (Med)</td>
</tr>
<tr>
<td>4.</td>
<td>Dr. Manjubhargava P</td>
<td>DNB PGT (Med)</td>
</tr>
<tr>
<td>5.</td>
<td>Dr. Jaydeep Majumder</td>
<td>DNB PGT (Med)</td>
</tr>
<tr>
<td>6.</td>
<td>Dr. Vihari Sasank D</td>
<td>DNB PGT (Med)</td>
</tr>
<tr>
<td>7.</td>
<td>Dr. Soumya Roy Chowdhury</td>
<td>DNB PGT (G &amp; O)</td>
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<td>8.</td>
<td>Dr. Anshu Mishra</td>
<td>DNB PGT (G &amp; O)</td>
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<td>9.</td>
<td>Dr. Medha</td>
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<td>Dr. Ashmi Bhattacharya</td>
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<td>Dr. Chimpoo M. Momin</td>
<td>DNB PGT (G &amp; O)</td>
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<td>12.</td>
<td>Dr. Sangani Jayesh Manilal</td>
<td>DNB PGT (Paed)</td>
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<td>13.</td>
<td>Dr. Abhishek Kumar Tiwari</td>
<td>DNB PGT (Paed)</td>
</tr>
<tr>
<td>14.</td>
<td>Dr. Vikash Sinha</td>
<td>DNB PGT (Surg)</td>
</tr>
<tr>
<td>15.</td>
<td>Dr. Arindam Ghosh</td>
<td>DNB PGT (Surg)</td>
</tr>
<tr>
<td>16.</td>
<td>Dr. Payoz Pandey</td>
<td>DNB PGT (Surg)</td>
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### LIST OF HOUSE STAFFS & INTERNS WORKING AT BRSH

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<tr>
<td>1</td>
<td>Dr. Ananda Sankar Roy</td>
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<td>Dr. Ivy Selina</td>
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### LIST OF CMP’S WORKING AT BRSH/SDAH DIVISION

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<td>1</td>
<td>Dr. Sanat Kr. Pain</td>
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### LIST OF GROUP “B” OFFICERS

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<td>1</td>
<td>Mr. S. Das</td>
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<td>Mr. Prabir Goswami</td>
<td>Bio-Chemist</td>
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<td>Mr. T.K. Adhikari</td>
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<td>Symposium on Recent Advances in Myocardial Infarction</td>
<td>Dr. J. C. Banerjee Kolkata</td>
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<td>1972</td>
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<td>Dr. K. K. Datey Bombay</td>
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<td>Dr. A. K. Basu Kolkata</td>
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<td>Dr. A. B. Mukherjee Kolkata</td>
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<td>Dr. Subodh Dutta Kolkata</td>
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<td>Dr. Smt. V. C. Acharyya Bombay</td>
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<td>Dr. Mihir Kumar Mitra Kolkata</td>
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<td>Symposium on Recent Advances in Clinical Practice</td>
<td>Dr. Lala Suraj Nandan Prasad Patna</td>
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<td>Dr. P. B. Chakraborty Kolkata</td>
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<td>Symposium on Thyroid Disorders &amp; Endoscopies</td>
<td>Dr. M. K. Chhetri Kolkata</td>
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<td>1982</td>
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<td>Dr. M. K. Mukherjee Kolkata</td>
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<td>Continued Medical Education CME Programme &amp; Update Session</td>
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<td>Golden Jubilee Celebration and 14th Annual Scientific Conference</td>
<td>Dr. A. L. Goswami New Delhi</td>
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<td>1985</td>
<td>Emergencies in Clinical Practice</td>
<td>Dr. J. M. Ghosh Kolkata</td>
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<td>1986</td>
<td>Progress in Medical Sciences</td>
<td>Dr. K. Bhattacharjee Kolkata</td>
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<td>Coronary Artery and by-pass Surgery; Head Trauma and High Risk Pregnancy</td>
<td>Dr. Bhaskar Roychowdhury Vice-Chancellor Calcutta University</td>
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<td>Dr. Susil C. Muni Bombay</td>
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<td>Prof. (Dr.) Siddharta Majumdar, Vice Chancellor-West Bengal University of Health Sciences</td>
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<td>Total Health Care to Railway Beneficiaries-a Challenge</td>
<td>Dr. S.H. Advani, Mumbai</td>
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<td>Dr. Pradip Mitra, Director, IPGME &amp; R and SSKM Hospital, Kolkata</td>
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<td>2011</td>
<td>Key Hole Surgery</td>
<td>Dr. A.K. Vyas, CMD/West Central Railway</td>
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<td>Preventive Medicine-Transforming Health Care Delivery</td>
<td>Dr. S.C. Kundu, Ex CHS/BRSH</td>
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<td>Public Health Challenges in Indian Railways</td>
<td>Dr. M.K. Budhalakoti, DG RHS/Rly. Board</td>
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Indian Railway Medical Service Association (IRMSA)
B.R. SINGH HOSPITAL
&
CENTRE FOR MEDICAL EDUCATION & RESEARCH
EASTERN RAILWAY, KOLKATA

1933- B. R. SINGH HOSPITAL ESTABLISHED
1966- DOCTORS’ CLUB FORMED
1971- INCEPTION OF ANNUAL SCIENTIFIC SEMINAR
2011- NAME OF “DOCTORS’ CLUB” CHANGED TO
INDIAN RAILWAY MEDICAL SERVICE ASSOCIATION (IRMSA)

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<td>Dr. D. Sengupta (1978-1979)</td>
<td>Dr. R. C. Poddar (1979-1980)</td>
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<td>Dr. S. R. Sen (1990-1991)</td>
<td>Dr. Ashok Saha (2014-)</td>
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<td>Dr. Ajit Kr. Das (1994-1998)</td>
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### LIFE MEMBERS OF DOCTORS’ CLUB (IRMSA), B.R. Singh Hospital

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<tr>
<th>Sl No</th>
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<tr>
<td>1</td>
<td>Dr. S. C. Kundu</td>
<td>Med</td>
<td>P 49, CIT Scheme, VIM(S), Phool Bagan, Kol-54.</td>
<td>2362-9692, 9433127498</td>
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<td>2</td>
<td>Dr. R. C. Poddar</td>
<td>Anaesth</td>
<td>774, Lake Town, Block A, Kol-89.</td>
<td>033- 2534 2886</td>
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<td>Dr. N. C. Biswas</td>
<td>Gen</td>
<td>CG 118, Sector II, Salt Lake City, Kol-91</td>
<td>9748334612</td>
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<td>4</td>
<td>Dr. D. K. Pal</td>
<td>Radio</td>
<td>502 B, Block M, New Alipore, Kol-53</td>
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<td>5</td>
<td>Dr. A. Bhattacharjee</td>
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<td>Radha Ballav Rd., Po: Naihati, Dt. 24 PGS(N), PIN: 743165</td>
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<td>Dr. A. K. Basu</td>
<td>Dental</td>
<td>44/1A, Ramdhon Mitra Lane, Kol-4</td>
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<td>7</td>
<td>Dr. D. K. Das</td>
<td>Med</td>
<td>Flat No: 23E, Tower-2, South City, 375, Prince Anwar Shah Rd., Kol-68</td>
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<td>Cardio</td>
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<td>Skin</td>
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<td>Dr. P. Goswami</td>
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<td>Dr. Ruma Mukherjee</td>
<td>Med</td>
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<td>16</td>
<td>Dr. J. Chattopadhyay</td>
<td>Path</td>
<td>KRISHNA(2nd floor), P-102, S.N.Roy Rd., 3, Chatterjee Colony, Kol-38</td>
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<td>17</td>
<td>Dr. Gopa Sinha</td>
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<td>311, Unique Park, Behala, Kol-34</td>
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<td>18</td>
<td>Dr. A Das Chowdhury</td>
<td>Surg</td>
<td>PO: Kalyan Nagar, Via: Pansila, Dt: 24 Pgs.(N)</td>
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<td>Dr. Tarun Choudhuri</td>
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<td>Dr. S. K. Rakshit</td>
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<td>21</td>
<td>Dr. Bhaskar Ghosh</td>
<td>Neuro</td>
<td>258C, Rash Behari Avenue, Kol-19</td>
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<td>22</td>
<td>Dr. N. G. Adhikari</td>
<td>Gen</td>
<td>29, Nager Bazar Rd., Swapnateet Abasan, Flat No. 404, Block-G, Kol-74</td>
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66 Dr. Pradip Ghosh  Radio  66B, Dr. Suresh Sarkar Rd., Kol-14  2284-6600, 9002021546
67 Dr. B. D. Bhattacharjee  Cardio  Bindhyas Basini Tola Rd, PO: Ariadaha, Kol-057  9002021511
68 Dr. Rana Bhattacharjee  Med  MIG, Housing Estate, Block M, Flat-2, Belgachia, Kol-37  2557-3828, 9002021504
69 Dr. Subhasis Das  Radio  Flat 4/1, Rly. Officers' Colony, J. K. Pal Rd., New Alipur  2446-6193, 9002021547
70 Dr. Lipi Sarkar  Anes  8/6, Sarada Pally, Vidyasagar Sarani, Asansol-713304  9002023517
71 Dr. K. C. Mondal  Psy  4, Dr. Sundari Mohan Avenue, 4th Floor, Kol-14  2246-2673/2244-4752
72 Dr. B. C. Saha  Gynae  Fc-121, Sector III, Salt Lake City, Kol-91  2337-3580, 9002022532
73 Dr. Sudhamoy Dutta  Radi  8/6, Sarada Pally, Vidyasagar Sarani, Asansol-713304  9002023517
74 Dr. Anupam Sett  Gen  Rly. Qrs. No: 114/H, B. R. Singh Hospital  9002020502
75 Dr. R. N. Roy  Gynae  Flat No: 547, Rail Vihar, Near Rubi Hospital, Kol-167  9836245844, 9007041500
76 Dr. H.K. Ghosal  Med  Ghosalpara Rd., Barasat, PIN:743210  2552-9658
77 Dr. B. Gupta  Surg  7/1, 3R, Phase II, Purbachal, Salt Lake City, Kol-91  9002021511
78 Dr. Saradindu. Roy  Gen  1/A, Chandi Bose Lane, Kol-85  94320-09057, 94332-12335, 9002020712
79 Dr. C. Majumder  12, Kailash Nagar, Bandel, Hooghly, PIN:721123
80 Dr. Subeswar Dasgupta  Nuclear  169/12, D.H. Rd., PO: Sahapur, Kol-38  93309-20704, 2478-7945, 9002021505
81 Dr. T. K. Chowdhury  Gen  B-13/6, Golf Green Complex, Kol-95  2412-1933/2407-1454, 9831415027
82 Dr. Debapriya Sengupta  Path  Flat No: 2C, 44R Gariahat Rd., Kol-29  9831226028/9433011906, 9002021551
83 Dr. K. C. Adhikary  Green Park, Mukherjee Bagan, PO: Bandel, Hooghly, PIN: 712123
84 Dr. Ashoke Saha  Anaes  AE-315, Sector-I, Salt Lake City, Kol-64  9831096971, 2337-3772, 9002021526
85 Dr. Gayetri Guha  Gen  65/4/C, J aimdali Mistry Lane, PO:Alipur,Kol-27  2479-7004
86 Dr. P. K. Bose  878, Cossipore Govt. Qrs., Block L-7, Kol-2  2558-7638, 9002027506
87 Dr. Subir Kanjilal  Surg  Eloor, Suncity, 105/1, Bidhannagar Rd, Kol-67  9002021517
88 Dr Moussumi Majumder  Anes  18/1C, Uday Sankar Sarani, Kol-33  9002022546
89 Dr. Subrata Pal  Gastro  708, Diamond Harbour Rd., Kol-8  9830016096
90 Dr. T. K. Maty  Gen  114/C, B. R. Singh Hospital Qrs., Sealdah, Kol-14  2354-1475, 9002021555
91 Dr. Sarabhtam Mukherjee  Med  Sanajhuri Flat No: C/107, 40/2, B. T. Rd, Kol-2  2558-7521, 9002021567
92 Dr. Mandira Banerjee  Gen  8M Ultadanga Housing Co-op. Society, Flat No.E2/6, Ultadanga Main Rd., Kol-67  94330-17738/2356-6155, 9007041508
93 Dr. Shikha Singh  Gynae  Block II, Flat No: A-2, Ekta Olendar, 16, R.N.Chowdhury Rd, Kol-15  9007338402
94 Dr. D. R. Das  Surg  1) 102 Lansdoune Rd, Kol-26  2) 113/4 Sarat Ghosh Garden Rd., Kol-31  2405-2286, 9830614290, 9002021519
95 Dr. S. C. Das  Anes  Loknath Bhawan, 102 Kalibari Rd, Nalta, Dum Dum, Kol-28  9836414533
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ABSTRACT

A Case - Control Study of Vitamin D level in Childhood Tuberculosis

Dr. Sangani Jayesh, Dr. Debasish Bandyopadhyay, Dr. Tarun Choudhuri, Dr. Gautam Ghosh
Department of Pediatrics, B.R Singh Hospital & Centre for Medical Education & Research, Sealdah Kolkata-700014, West Bengal

Objectives: (a) To study 25 hydroxy vitamin D(vitamin D) level in cases of pulmonary or extra pulmonary tuberculosis(TB) in age group(below 18 years) before receiving anti TB treatment and compare with controls.(b)To assess whether the background factors like age group, sex, religion, socioeconomic class, weight for age(WFA), height for age(HFA) affects vitamin D status in subjects.

Methods: TB patients, diagnosed as per RNTCP guidelines selected from paediatrics OPD and ward were enrolled in case(n=100) group. Controls(n=100) were age, sex matched healthy subjects. A demographic questionnaire was completed regarding age, sex, address, socioeconomic status, religion. Anthropometric measures -HFA and WFA were made. A detailed history and thorough clinical examination were performed. Measurement of serum vitamin D level was done in all subjects. Primary outcome was serum vitamin D level. Secondary outcome was effect of demographic factors on hypovitaminosis D. Statistical analysis was done by Chi Square test and Logistic regression analysis.

Results: Majority children with tuberculosis were either vitamin D deficient(74%) or insufficient (14%). Mean vitamin D concentration were significantly lower in TB patients (25.02±12.98ng/mL) than in healthy controls (42.3±15.65ng/mL)(p<0.001). Vitamin d level was also significantly low in underweight subjects. Calcium level was statistically significant low in lower vitamin D level category. Upper & middle class subjects have more common hypovitaminosis D with adjusted odds ratio (OR) 2.29 and 2.01 respectively in whole study. Stunted have more hypovitaminosis D with adjusted OR 1.82 and 2.29 in whole study subjects and case respectively.

Conclusion: There is association between low vitamin D and tuberculosis. Majority cases were deficient while controls were just insufficient in vitamin D level. Underweight subjects had significantly lower vitamin D level. Higher socioeconomic class, low height were independent predictors of hypovitaminosis D. Awareness regarding optimum sunlight exposure and balanced diet is necessary. We should consider vitamin D fortification and supplementation in vulnerable groups.

TOPIC:
Status of protection of Railway Health Care Workers against blood borne pathogens

DR. K. Satyababu, MD., DMRD., 90031 41513, 94440 77217
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Patient care puts all Railway Health Care workers to risk of exposure to blood and potentially infective material. These exposures carry the risk of infection from blood-borne pathogens such as Hepatitis B virus, Hepatitis C virus and HIV. Hepatitis B viral infection is the major public health problem in India, being the most common and prevalent (4-5% of general population carrying the virus) and also the most infectious agent (100 times more infective than HIV and ten times more than HCV). A study was done amongst all health care workers in a 120 bedded Railway Production Unit Hospital - all doctors, staff nurses, lab technicians, dressers and theatre staff in the Integral Coach Factory Hospital, Chennai-38 over a period of 3 months from September 14 to mid November 14 to evaluate the level of risk of exposure to blood-borne pathogens, their status of awareness, level of compliance to standard Universal Precautions, their status of immunisation against Hepatitis B virus, the adequacy of protection following complete course of immunisation determined by their serum anti-HBs antibody levels, the applicability of work place control, use of medical safety devices, maintenance of Sharps Log, Exposure Register etc. The study contributed new information regarding the risk of Railway Health Care Personnel to exposure to blood-borne pathogens and more importantly identified opportunities to control exposure and prevent infections. It also calls for an urgent need for administrative regulations regarding standard protocols to be followed in all Railway Hospitals across the country over and above the ‘Universal Precautions’ and also foresees the need for introduction of work place controls and newer medical safety devices. It also raises up a few unanswered legal and financial issues.
ABSTRACT

Knowledge, Attitude and Practice Study on Biomedical Waste Management among Railway Paramedical Staff

Dr. Devesh Kumar, ACMS, RDSO, Lucknow (email: drdeveshkumar3@gmail.com) and
Dr. Poonam Singh Kharwar, Asst. Professor, Faculty of Education, B.H.U., Varanasi

Introduction
The wastes generated from healthcare establishments pose serious threat to the environment and the people associated with it. Govt. of India has enacted Biomedical Waste (BMW) Management and Handling Rules to address the problem. Safe and sustainable BMW management is not possible without favourable knowledge, attitude and practices (KAP) among health care providers. Indian Railways caters the needs of strong industrial workforce and their family members. To strengthen the BMW management in Railways, KAP study among paramedical staff was conducted as they are directly responsible for its better compliance.

Methods
Present study was conducted among 100 paramedical staff (nurses, pharmacists and technicians) working in hospitals at RDSO, North Eastern and Northern Railway Zones at Lucknow and Gonda through self constructed questionnaire supplemented by observation technique. Questionnaire consisted of 20 items of knowledge, 12 items of attitude and 7 items of practice.

Results
Overall KAP was found best in nurses (means 16.4, 48.45, 5.74) followed by pharmacists (15.82, 45.28, 5.64) and technicians (14.42, 44, 4.75). Majority had correct knowledge of sources of BMW, symbols and different colour coding used in practice and major associated risks. Majority of respondents believed that the proper management of BMW was a team work and that safe management efforts by hospital would increase the financial burden. All hospital has BMW management plans and teams, disposal in appropriate symbol and colour coded bins. Majority of staff (37.88% nurses, 18.18% pharmacists and 16.67% technicians) confessed not to have undergone any kind of training for BMW and have intense desire for appropriate training.

Conclusion
Overall KAP status among technician category is unsatisfactory requiring urgent training programmes. Although nurses and pharmacists have satisfactory knowledge, their attitudes and practice behaviour needs further strengthening by professional development programmes.

Keywords: Biomedical Waste (BMW) Management; Knowledge, Attitude and Practice (KAP) status; Paramedical staff.
ABSTRACT

COMPARISON OF PREVALENCE OF DRY EYE DISEASE IN RAILWAY OFFICE WORKERS USING COMPUTERS IN THEIR WORK AND GENERAL POPULATION

Dr. Shreya Banerjee
Senior Resident, Department of Ophthalmology
B R Singh Hospital, Kolkata

PURPOSE:
1. To find out the prevalence of dry eye disease in office workers with prolonged computer use and in general population.
2. To compare the prevalence in these two groups.

METHODS:
A case control study was conducted with 262 patients in the age group of 30-60 years of both sexes in the department of ophthalmology in a tertiary care railway hospital in the time period of January 2012 to December 2013. Symptoms of dry eye were evaluated with a six item questionnaire. Signs of dry eye were evaluated with tear film break up time, lissamine green staining, fluorescein staining, rose Bengal staining, Schirmer I test.

RESULTS:
Prevalence of symptoms of dry eye disease in office worker is 26.9% and in general population is 21.2%. Prevalence of signs of dry eye disease is 38.2% in office workers and 26.7% in general population with a p value of statistical significance. Computer use for >4 hours was associated with increased risk of dry eye disease (odds ratio 1.68, relative risk 1.30).

CONCLUSION:
Prevalence of dry eye disease is more in patients using computer for >4 hours per day than general population.

STATUS OF HEARING AMONG TRAIN DRIVERS IN HOWRAH DIVISION, EASTERN RAILWAY.

Dr. S. S. Ghosh
Sr. DMO/ENT/HWH/E. Rly

Background
There is a general perception that train drivers may be at increased risk of developing noise-induced hearing loss.

Aims
To study job-related hearing loss among train drivers in Howrah Division, Eastern Railway.

Methods
Audiograms from train drivers were done as a part of general Health check up. The results were compared with audiograms from an internal control group of railway workers not occupationally exposed to noise. The monaural hearing threshold level at 4kHz, the mean binaural value at 3, 4 and 6kHz and the prevalence of audiometric notches (=25 dB at 4kHz) were used for comparison.

Results
Audiograms were done for 100 drivers, and 50 people not occupationally exposed to noise with the set inclusion and exclusion criteria. No difference in hearing level or prevalence of audiometric notches was found between study groups after adjusting for age and gender.

Conclusions
Train drivers have normal hearing threshold levels comparable with those in non-exposed groups.
Key words: Noise-induced hearing loss, train drivers.
Integrating Healthcare data sharing into analytical decision making tool using mobile technology: An implementation study in Indian Railways

Dr. Anil Thomas, Dy CMD, S. Rly
Dr. S Ramprakash, Former CMD, S. Rly
Dr. K Satyababu, Sr. DMO/SG/ICF Hospital

Electronic health (eHealth) and Mobile Health (mHealth) systems present a strong and effective tool for enhancing the roles of Public Health Administrators and doctors by providing tools for collecting, exchanging, and viewing healthcare data as well as offering the possibility for receiving information and decision support. Introducing mobile health (m-health) technology in low-resource settings has been challenging and encouraging because of high levels of user acceptance, easy use smartphone based hardware and software design that helps transmission of statistical data, images and analytical approach based decisions to multiple users at a single time.

This paper describes the methodology and experience to evaluate the implementation of an m-Health integrated communication technology delivered via mobile phones using various popular mobile services platforms into Health Care Administrators decision making tool. The implementation is successful and this will have a proven low cost easy access technology that helps Public Health Administrators at Zonal levels to remain connected with Divisional Health Centers in Railway Health Services to provide health based analytical and decision support, as well as a proven strategy for implementing the mobile based technology. A mobile technology for healthcare data sharing and accompanying health based implementation model could provide a cost-effective means to improve the care for the beneficiaries.

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UTILITY OF MULTIPURPOSE HEALTH DRIVES

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"MULTI PURPOSE HEALTH DRIVES" Humane approach towards Railway beneficiaries living in Way side stations and gang huts.

Mission statement says “Total patient satisfaction through Humane approach & shared commitment of every single Doctor and paramedic to provide quality health care using modern & cost effective techniques & technologies”

Multi purpose health drives are conducted at wayside stations minimum once in a month of each station. Medical officer informs the station manager of the station one day in advance about MPH DRIVES. All supervisors like SSE/WORKS, SSE/ELECTRICAL/M, SSE/P-WAY and Health inspector with important staff will reach the station at a Fixed time and all employees with families will gather near VIP LOUNGE or waiting hall.

All patients are registered and their BP, RBS are checked, general condition is observed, auscultation for lungs and heart after hearing their complaints some medicine are given. A Door to door survey is done by NURSE accompanying the team and does immunization, attend to any DOTS TB patients covered by RNTCP. She also updates her ELIGIBLE COUPLE LIST, and watch for any antenatal cases.

Health inspector inspects drinking water sources like Water wells and tanks along with engineering staff, drainage system, any breeding places of mosquitoes and also check for residual chlorine

Medical officer inspects PME REGISTERS, BIODATA REGISTER, FIRST AID BOXES, WHEEL CHAIR, AND STRETCHERS, Nearby way side medical facilities, Inspection of Tea stalls, Medical examination of vendors, Inspection of station and premises, and later Health talk is given on deaddiction of alcohol, quitting smoking, Obesity, balanced diet, AIDS Awareness, benefits of small family. The MPH DRIVES proved very useful in rendering curative, preventive and health promotional services to railway beneficiaries. Provision of ROAD MOBILE VAN to wayside stations more advanced system of covering railway beneficiaries to their health needs in a more effective way and employees can have sick certificates issued at their work places. Lot of PILOT PROJECTS are taken up and they proved very useful and many times life saving also. MPH DRIVES instill confidence among railway beneficiaries living in far flung areas where there are no health facilities. Door step health care is also of similar in nature. Lot of time and man days of serving employees are saved to Railways.

The study period is from JUNE 2012 TO December 2014
HOSPITAL PROJECT MANAGEMENT IN INDIAN RAILWAYS IN THE CONTEXT OF THE CONSTRUCTION OF A MODULAR OPERATION THEATRE IN THE O.T COMPLEX OF DIVISIONAL RAILWAY HOSPITAL, NAGPUR

Dr. Meera Arora, ACMS, Divisional Railway Hospital, Nagpur, Central Railway

CASE STUDY: Divisional Railway Hospital, Nagpur has recently inaugurated its completely renovated Operation Theatre Complex on the 23rd of December 2014 after a painstaking journey of SEVEN long years. It is an integrated centrally air conditioned complex consisting of four Operation Theatres (One Modular Operation Theatre, One Major Operation Theatre, One Eye Operation Theatre, One Minor Operation Theatre, Surgical Scrub Station Area), a fully equipped Pre-Anaesthetic and Post-Anaesthetic Care Unit with Central Nursing Station, a well equipped Centralized Sterilization Services Department (CSSD), support areas like the Pantry cum Utility Room equipped with fully automatic Washing Machine and Dryer, Changing Rooms for all categories of staff including Doctors and Nurses, individual Doctor’s & Nurse’s Rooms, Surgical Store Rooms etc.

The Modular Operation Theatre: It is the first theatre of its kind in Central Railway, second at Divisional level in Indian Railways and one of less than 20 amongst 129 Railway Hospitals, country wide. It is a COMPLETE Modular Operation Theatre with a double domed shadow less LED OT Lighting System with full High Definition Camera System with full High Definition Surgical Grade Monitor with Laminar Air Flow and HEPA filters, stainless steel walls with antibacterial paint, antistatic antibacterial conductive flooring with flash covings, hermetically sealing doors, Surgeon Control Panel, X-Ray viewing board, List Board, Motorized viewing windows, Anaesthesia Pendant, Centralized Medical Gas Supply & Suction facility and a 3 Bay hands free Surgical Scrub Sink.

This Modular Operation Theatre is to be used for ultra clean surgeries in Orthopaedics like joint replacement and arthroscopic surgeries, advanced cysto-endoscopic urological surgeries, advanced laparoscopic & bariatric surgeries, plastic surgeries, ENT surgeries etc. Local expertise for the same are already empanelled.

DISCUSSION: Project Management has time tested protocols to be implemented by various stakeholders for successful execution.

Hospital Project Management in Indian Railways, is once again, more unique than a routine Hospital Project not only because of the above reasons, but also because of the the absence of an objective policy framework, precedent, project prioritization and all pervasive severe fund constraints. Special mention is to be made of the “involved persons” factor.

In this case study, the implementation of the Modular Operation Theatre Hospital Project by Divisional Railway Hospital, Nagpur, is explored in the light of the above Hospital Project Management paradigms and possible pathways to make the journey simpler for travelers brave enough to follow, are suggested.

CONCLUSION: Addressing the special requirements of Hospital Project Management in Indian Railways would make Infrastructure Development in Indian Railways technologically relevant, smooth & a time bound affair without cost overruns. With excellent infrastructure in place, improvements in service delivery are a logical & natural corollary. A possible lamp post is the Report of the CAG on “Hospital Management in Indian Railways” with special emphasis on Infrastructure Development in the Indian Railways, submitted to the Parliament on the 12th of December 2014.

ABSTRACT
ABSTRACT

Cost Analysis at B R Singh Hospital, Eastern Railway, Sealdah

Dr. Subhashish Das
ACHD, B.R Singh Hospital, Eastern Railway, Sealdah.

Introduction:
Cost analysis provides an in-depth examination of the costs hospitals incur in providing patient care and the value of services (economic/monetary) provided. The key findings demonstrate that hospital prices are directly related to the costs of providing services to patients and their communities. Hospital management has a responsibility to the community—to provide health care services that the community needs, at an acceptable level of quality, and at the least possible cost. Cost finding and analysis can help departmental managers, hospital administrators, and policymakers to determine how well their hospitals meet these public needs.

Objective:
To find the cost effectiveness of B.R Singh Hospital over a period of three years from 2011-12 to 2013-14

Method:
- Total cost with break ups was determined from Office Records and Budget Allocation
- Major service areas like Indoor, OT, OPD, Pathology etc. were ascertained
- Tabulation sheets were prepared and distributed to respective departments/service areas
- Total no of each service provided like number of Operations, number of X Rays and Pathological Investigations, etc were calculated
- Value of services were tabulated and rates calculated as per CGHS/Private Corporate Hospital rates in Kolkata
- Recurrent Cost included Medicines, surgical items, X ray films, Pathological reagents, Pacemakers, Contractual agreements including Doctors on Duronto Express, AMC of Equipment, Medical Oxygen, Kitchen cost, Tie-ups with Private hospitals including CT Scan, MRI scan, Reimbursement, Salary, Maintenance of Ambulance, Kitchen cost, BSNL Phone & Electricity Bills, AMC of computer and Consumables for Computer, Advertising, Maintenance of Building, Depreciation of machines, Honorarium to Visiting Consultants, Contracts, etc.

To find the economic value of services, each area of hospital where service was provided was identified and the total number of such services in one year found out. This was equated to both existing CGHS Rates and Private Hospital rates and the total amount of economic value of all the services taken together was calculated.

Results:
Contrary to the common belief where Government hospitals are a liability, the study at B.R Singh Hospital, Sealdah indicates profit of 25% when compared to CGHS rates and 100% when compared to Private Hospitals. Profit can be increased further by reducing tie-ups with Private Hospitals and minimizing indoor admissions/duration of stay.

Conclusion:
Cost may increase depending upon medical specialities, better facilities and size of accommodation to the patients. Therefore, looking at the costs for modern hospitals in metropolitan cities the cost may be high. The study also demonstrates that detailed costing of hospital operations in India is feasible. The biggest challenge lies in collecting data from the hospitals. Although accounts data can be accessed relatively easily, obtaining accurate activity statistics, stock-related data, and price information is difficult, improvements in hospital record keeping could help researchers, whose studies could then help the hospitals become more efficient.

Our study hospitals consumed, on an average, 10 percent of all costs for outpatient functions; Inpatient departments consumed more resources than outpatient service and is cheaper than seeking treatment, both indoor and outdoor, in private or Government hospitals at CGHS or higher rates.
LOOKING BEYOND CURE –HEALTHY WORK FORCE AT INDIAN RAILWAYS

Dr. Madhumita Dobe, Director-Professor (Public Health) & Head
(Department of Health Promotion & Education), AIH & PH KOLKATA

The history of rail transport in India began in the mid-nineteenth century. Since then it has grown in expanse and organizational structure including that of its medical department. Currently the health of the large workforce employed directly and indirectly in the Indian Railways, is looked after through its large network of facilities for screening and treatment.

Despite having well defined policies for promoting health of the employees of Indian Railways which also look into occupational safety & hazard issues, there is a growing need of focussed attention on the impact of psychosocial factors in the workplace. Work-related stress, violence at work and other such factors are now acknowledged as issues, which affect health and wellbeing of all employees and have a significant impact on their health, absenteeism and performance.

It is time to acknowledge that the world of work in the Railways has also undergone transformation resulting in emerging psychosocial risks which require an approach that breaks away from traditional efforts and moves towards new effective responses in the form of initiatives which include preventive practices and incorporation of health promotion measures, such as good nutrition, exercise and other healthy lifestyles including coping skills for stress, to contribute to well-being of the employees.

Health promotion programs focussed on the promotion of health among all workers and their families through preventive and assistance programmes in the areas of drug and alcohol abuse, HIV/AIDS, workplace stress, violence at work and the promotion of tobacco-free workplaces should be planned, implemented and evaluated in the railway settings.

The potential of workplace health promotion to enhance working life is a vital component in improving workplace productivity and performance, thereby improving the long-term well-being of workers and their families, and reducing pressure on health, welfare and social security systems paid by the employer. Integrating health promotion measures into existing health management systems will contribute to the construction of a preventive culture thereby creating safe work conditions and a healthy workforce through the social dialogue approach, with the involvement of workers, governments and other stakeholders, addressing these problems.
From Evidence-based Medicine to Evidence-Based Public Health

DR. RAJIV KUMAR JAIN
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MNAMS; FIPHA; Diploma in Chinese Language.
ACMD (H&FW)/N. Rly/New Delhi

The evidence-based movement in the health sciences is over a decade old, and its beginnings are tied to evidence-based practice in medicine. The first appearance of the term evidence-based medicine occurred in the fall of 1990 in a document describing the residency program at Canada’s McMaster University:

Residents are taught to develop an attitude of “enlightened skepticism” toward the application of diagnostic, therapeutic, and prognostic technologies in their day-to-day management of patients. This approach, which has been called “evidence-based medicine,” is based on principles outlined in the text Clinical Epidemiology. The goal is to be aware of the evidence on which one’s practice is based, the soundness of the evidence, and the strength of inference the evidence permits. The strategy employed requires a clear delineation of the relevant question(s); a thorough search of the literature relating to the questions; a critical appraisal of the evidence, and its applicability to the clinical situation; and a balanced application of the conclusions to the clinical problem.

Some of the key concepts in this description are evidence and critical appraisal. Evidence can be defined as that “which furnishes proof,” and critical appraisal can be defined as an evaluation process “which determines the significance or worth of something by careful appraisal and study.” These concepts became a fundamental principle for a new approach to patient care, using evidence-based principles and a philosophy that evidence from the medical literature should support clinical decisions. As a body of literature began to emerge, it was soon recognized that evidence-based medicine approaches could be applied to other fields, including public health. Within this field, some of the principal user groups are practitioners, policy makers, researchers, the general public, and health sciences information professionals.

There are notable differences between the two disciplines of medicine and public health; however, that are helpful to understand in the application of evidence-based approaches to decision making.

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<td>Substantive Health Problem (Nutrition);</td>
</tr>
<tr>
<td></td>
<td>Skills in Assessment, Policy Development, and Assurance</td>
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As shown on the chart above, public health research and practice is aimed at whole communities. Evidence-based approaches within this context require an understanding of the complexities of organizational structures, interactions, and myriad other dynamics that shape and influence decision making at the local, state, regional, and national levels within which public health operates and within which policies and programs are established.

**Definition of Evidence-Based Public Health**

Evidence-based public health is defined as the development, implementation, and evaluation of effective programs and policies in public health through application of principles of scientific reasoning, including systematic uses of data and information systems, and appropriate use of behavioral science theory and program planning models.

**Public Health Knowledge Domains**

Public health is an interdisciplinary field of study and research. The following list identifies twenty knowledge domains within public health. Awareness of the databases associated with a specific knowledge domain can be useful when searching the literature. For example, articles on health services administration may be located in business-related databases as well as the health sciences literature, and articles on health promotion and education may be located in education-related databases.

- Biostatistics
- Chronic Diseases & Conditions
- Community Health
- Communicable Diseases
- Disaster Control & Emergency Services
- Environmental Health
- Epidemiology
- General Public Health
- Global Health
- Health Services Administration
- Health Promotion & Education
- HIV/AIDS
- Maternal & Child Health
- Nutrition
- Occupational Health
- Public Health Informatics
- Public Health Laboratory Sciences
- Public Health Nursing
- Social & Behavioral Sciences
- Vital Statistics & Surveillance

**“When and Why” of Using an EBPH Approach**

Evidence-based practice is also referred to as “best evidence.” The terminology is important because it emphasizes that it is the quality of evidence that is of primary significance, not the
quantity, that is, it is the “best” information that is sought on a particular topic of interest, not the “most” information.

**Why is it important to use a best-evidence approach?**

Using an EBPH approach can be beneficial because it:
- provides assurance that decision making is based on scientific evidence and effective practices;
- helps ensure the retrieval of up-to-date and reliable information about what works and doesn’t work for a particular public health question;
- provides assurance that one’s time is being used most efficiently and productively in reviewing the “best of the best” information available on the particular public health question.

**When is it important to use a best-evidence approach?**

A best-evidence approach can be used:
- when it’s important to have scientific evidence to support decision making;
- when evaluating the effectiveness and cost benefits of health programs;
- when implementing new health programs;
- when establishing new policies; and
- when conducting literature reviews for grant projects.

**Steps in Searching and Evaluating the Literature**

**Guide to Searching the Public Health Literature**

A 7-step process can be used for searching the evidence-based public health literature.
- Step 1 : Determine the public health problem and define the question.
- Step 2 : Select information sources.
- Step 3 : Identify key concepts and terms.
- Step 4 : Conduct the search in subject-appropriate databases.
- Step 5 : Select documents for review.
- Step 6 : Abstract relevant information from the documentation.
- Step 7 : Summarize and apply the literature review.

**Guide to Evaluating the Quality and Methodology of Public Health Research Results**

The following set of questions can be used to assess reported research results.

**What are the results?**
- Were the results similar from study to study?
- What are the overall results of the review?
- How precise were the results?
- Can a causal association be inferred from the available data?

**Are the results valid?**
- Did the review explicitly address the public health question?
- Was the search for relevant studies detailed and exhaustive? Is it likely that important, relevant
studies were missed?

- Were the primary studies of high methodological quality?
- Were assessments of studies reproducible?

How can the results be applied to public health practice and interventions?

- How can the results be interpreted and applied to public health?
- Were all important public health outcomes considered?
- Are the benefits worth the costs and potential risks?

The following list of subject headings can be used when conducting searches in PubMed for evidence-based public health research articles.

In addition to the subject headings listed, you can also do title searches [ti] in PubMed on the following terms:

- Best evidence [ti]
- Critical appraisal [ti]
- Effective Programs [ti]
- Evidence based public health [ti]
- Science based [ti]
- Systematic review [ti]

Advisory committees:

Groups set up to advise governmental bodies, societies, or other institutions on policy. (From Bioethics Thesaurus). Year introduced: 2002.

Biomedical research:

Research that involves the application of the natural sciences, especially biology and physiology, to medicine. (From American Heritage Dictionary, 4th ed). Year introduced: 2003.

Case control studies:

Studies which start with the identification of persons with a disease of interest and a control (comparison, referent) group without the disease. The relationship of an attribute to the disease is examined by comparing diseased and non-diseased persons with regard to the frequency or levels of the attribute in each group. Year introduced: 1990.

Case reports [Publication Type]:

Clinical presentations that may be followed by evaluative studies that eventually lead to a diagnosis. Year introduced: 1966.

Clinical trials:

Pre-planned studies of the safety, efficacy, or optimum dosage schedule (if appropriate) of one or more diagnostic, therapeutic, or prophylactic drugs, devices, or techniques selected according to predetermined criteria of eligibility and observed for predefined evidence of favorable and unfavorable effects. This concept includes clinical trials conducted both in the U.S. and in other countries. Year introduced: 1980.
Cohort studies:
Studies in which subsets of a defined population are identified. These groups may or may not be exposed to factors hypothesized to influence the probability of the occurrence of a particular disease or other outcome. Cohorts are defined populations which, as a whole, are followed in an attempt to determine distinguishing subgroup characteristics. Year introduced: 1989.

Consultants:
Individuals referred to for expert or professional advice or services. Year introduced: 1978.

Cost-benefit analysis:
A method of comparing the cost of a program with its expected benefits in dollars (or other currency). The benefit-to-cost ratio is a measure of total return expected per unit of money spent. This analysis generally excludes consideration of factors that are not measured ultimately in economic terms. Cost effectiveness compares alternative ways to achieve a specific set of results. Year introduced: 1976.

Cross-sectional studies:
Studies in which the presence or absence of disease or other health-related variables are determined in each member of the study population or in a representative sample at one particular time. This contrasts with longitudinal studies which are followed over a period of time. Year introduced: 1990 (1975).

Decision making:
The process of making a selective intellectual judgment when presented with several complex alternatives consisting of several variables, and usually defining a course of action or an idea.

Decision support techniques:
Mathematical or statistical procedures used as aids in making a decision. They are frequently used in medical decision-making. Year introduced: 1991.

Epidemiologic research design:

Epidemiologic studies:
Studies designed to examine associations, commonly, hypothesized causal relations. They are usually concerned with identifying or measuring the effects of risk factors or exposures. The common types of analytic study are case-control studies; cohort studies; and cross-sectional studies. Year introduced: 1998.

Evaluation studies [Publication Type]:
Works consisting of studies determining the effectiveness or utility of processes, personnel, and equipment. Year introduced: 2001.

Evidence-based medicine:
The process of systematically finding, appraising, and using contemporaneous research findings as the basis for clinical decisions. Evidence-based medicine asks questions, finds and appraises the relevant data, and harnesses that information for everyday clinical practice. Evidence-based medicine follows four steps: formulate a clear clinical question from a patient's problem; search
the literature for relevant clinical articles; evaluate (critically appraise) the evidence for its validity and usefulness; implement useful findings in clinical practice. The term "evidence based medicine" (no hyphen) was coined at McMaster Medical School in Canada in the 1980's to label this clinical learning strategy, which people at the school had been developing for over a decade. (From BMJ 1995;310:1122). Year introduced: 1997.

**Health services research :**

The integration of epidemiologic, sociological, economic, and other analytic sciences in the study of health services. Health services research is usually concerned with relationships between need, demand, supply, use, and outcome of health services. The aim of the research is evaluation, particularly in terms of structure, process, output, and outcome. (From Last, Dictionary of Epidemiology, 2d ed). Year introduced: 1980.

**Intervention studies :**

Epidemiologic investigations designed to test a hypothesized cause-effect relation by modifying the supposed causal factor(s) in the study population. Year introduced: 1990.

**Longitudinal studies :**

Studies in which variables relating to an individual or group of individuals are assessed over a period of time. Year introduced: 1979 (1975).

**Meta-analysis :**

A quantitative method of combining the results of independent studies (usually drawn from the published literature) and synthesizing summaries and conclusions which may be used to evaluate therapeutic effectiveness, plan new studies, etc., with application chiefly in the areas of research and medicine. Year introduced: 1989.

**Outcome assessment (health care):**

Research aimed at assessing the quality and effectiveness of health care as measured by the attainment of a specified end result or outcome. Measures include parameters such as improved health, lowered morbidity or mortality, and improvement of abnormal states (such as elevated blood pressure). Year introduced: 1992.

**Peer review, research :**

The evaluation by experts of the quality and pertinence of research or research proposals of other experts in the same field. Peer review is used by editors in deciding which submissions warrant publication, by granting agencies to determine which proposals should be funded, and by academic institutions in tenure decisions. Year introduced: 1994.

**Prospective studies:**

Observation of a population for a sufficient number of persons over a sufficient number of years to generate incidence or mortality rates subsequent to the selection of the study group. Year introduced: 1967 (1965).

**Practice guidelines :**

Directions or principles presenting current or future rules of policy for assisting health care practitioners in patient care decisions regarding diagnosis, therapy, or related clinical circumstances. The guidelines may be developed by government agencies at any level, institutions, professional societies, governing boards, or by the convening of expert panels. The guidelines form a basis for
the evaluation of all aspects of health care and delivery. Year introduced: 1993.

Program evaluation:
Studies designed to assess the efficacy of programs. They may include the evaluation of cost-effectiveness, the extent to which objectives are met, or impact. Year introduced: 1989.

Qualitative research:
Research that derives data from observation, interviews, or verbal interactions and focuses on the meanings and interpretations of the participants (From Holloway and Wheeler, "Ethical issues in qualitative nursing research," Nursing Ethics, 1995 Sep; 2(3): 223-232). Year introduced: 2003.

Randomized controlled trials:
Clinical trials that involve at least one test treatment and one control treatment, concurrent enrollment and follow-up of the test- and control-treated groups, and in which the treatments to be administered are selected by a random process, such as the use of a random-numbers table. Treatment allocations using coin flips, odd-even numbers, patient social security numbers, days of the week, medical record numbers, or other such pseudo- or quasi-random processes, are not truly randomized and trials employing any of these techniques for patient assignment are designated simply CONTROLLED CLINICAL TRIALS. Year introduced: 1990.

Research:
Critical and exhaustive investigation or experimentation, having for its aim the discovery of new facts and their correct interpretation, the revision of accepted conclusions, theories, or laws in the light of newly discovered facts, or the practical application of such new or revised conclusions, theories, or laws. (Webster, 3d ed).

Research design:
A plan for collecting and utilizing data so that desired information can be obtained with sufficient precision or so that an hypothesis can be tested properly. Year introduced: 1973.

Retrospective studies:
Studies used to test etiologic hypotheses in which inferences about an exposure to putative causal factors are derived from data relating to characteristics of persons under study or to events or experiences in their past. The essential feature is that some of the persons under study have the disease or outcome of interest and their characteristics are compared with those of unaffected persons. Year introduced: 1967 (1965).

Risk assessment:
The qualitative or quantitative estimation of the likelihood of adverse effects that may result from exposure to specified health hazards or from the absence of beneficial influences. (Last, Dictionary of Epidemiology, 1988). Year introduced: 1995.

Validation studies [Publication Type]:
Works consisting of research using processes by which the reliability and relevance of a procedure for a specific purpose are established. Year introduced: 2001.

Hierarchy of Evidence
Not all evidence is judged to be of equal value, that is, there are hierarchies of research design that are evaluated to have different strengths, different levels of value in the decision making
process. See the two charts below - one graphically represented, one textually to help understand the concepts important to critical appraisal, assessment, and evaluation of research.

**The Evidence Pyramid**

![Evidence Pyramid Diagram](image)

**Levels of Evidence**

- **Category I**: Evidence from at least one properly randomized controlled trial.
- **Category II-1**: Evidence from well-designed controlled trials without randomization.
- **Category II-2**: Evidence from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.
- **Category II-3**: Evidence from multiple times series with or without intervention or dramatic results in uncontrolled experiments such as the results of the introduction of penicillin treatment in the 1940s.
- **Category III**: Opinions of respected authorities, based on clinical experience, descriptive studies and case reports, or reports of expert committees.

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“Doctor Reborn”

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Introduction-
Writing an article may not be that easy but systematic expression of thoughts may be an easier approach. Comprehending that idea, I ventured out to write something about what I learnt, felt and thought over last few years.

Earlier when we passed out of medical colleges, we learnt only to become patient-centric, concerned about his/her disease process, related treatment and well-being only. Hardly we used to deal with patient’s other psycho-social factors, difficulties and rarely used to communicate with patient’s relatives. It was literally one-way process from our side and since patients used to assume doctors as “demi-gods”, they rarely braved to question us. Neither there was, and nor today there exists any subject on communication skills within the medical school curriculum. So doctors are mostly stamped as poor communicators and hence poor managers. There are examples of exceptions of course. But scenario has begun to change for last one and a half decade. My younger colleagues, who are torch-bearers of our organization, are no more ‘doctors’ only, but are budding and promising and potential skilled managers now------a personal strong feeling.

Subject-
Contrary to popular belief, medical doctors can become effective and efficient corporate managers. Doctors share many of a business manager’s best qualities — Richard Smith, editor of “The British Journal of Medicine”, in his article named, “What doctors and managers can learn from each other----A lot”, wrote - Both professions are full of highly committed people who work extremely hard - often to the extent of damaging themselves and their families. Each have unique characteristics likewise, that when adapted by the other, result in a powerhouse product. Managers and doctors are people of action. They are also used to taking risks. There are specialists in both the professions: Managers may specialize in finance, marketing or human resources just as Doctors may in their various disciplines. Both professions need competence in communication, but today both have mostly poor reputation as communicators, but have excessive jargon. Interpersonal skills are also crucial in both professions, and the difficult most part of management is the ‘touchy-feeling’ aspects. Managers and doctors have to break and come out of that aspect with certain change and have to try to encourage people in their respective environment to change....

Some time spent with customers eg. doctors with patients, is invaluable and practically hand-picked senior doctors find some way to build this into their working lives. This difference in orientation is important: **Doctors think first about their individual patients, Managers think first about organization.** For any hospital or primary care center to succeed, it will need both kinds of thinking.

In terms of strategic thinking and working with a team, however, it is doctors who will benefit more if they take their cue from managers and not the other way around. This requires building dynamic partnerships with the clients in order to provide right kind of health services and products to them, matching organizational capacity with demand.
For the past couple of years, a revolution has been going on in medical education. Gone are the days of the “Men who play God”. The focus has thus shifted from the doctor to the patient. Previously, in medical science the mindset was: “see one, do one, teach one”. All that has now changed to involve new models like mentoring, coaching, self-assessment, ethics, leadership and other psychosocial components. These aspects of medical education today complement technical competencies to promote a more complete approach towards health. The epitome of this revolution today in medical education is a “new breed of doctor”, that bridges technical competency, patients’ needs and psychosocial milieu. Management is a natural progression of this revolution, management is an added competency to make better doctors and none other than our railways would be an apt platform to appropriate such skill. Nowadays doctors do not say “We will cure disease”, rather says “This is how we plan or intend to manage your conditions”.

Believe it or not, our new breed of doctors has the entrepreneurial spirit, only to be explored by their right kind of seniors. They are aware that people can be influenced, mobilized and added to the armamentarium of medical and surgical procedures to manage patients.

It is hightime we should start to relate change in our railway organization and society in general. In initiating a change effort, we actually create a sense of urgency, try to win over people to come in on the change effort, bestow ownership for change and if our leaders own the change, they become the effectors of sustainable change. For this, a genuine and permanent interpersonal relationship is required and such relationship can only prosper if it revolves around the needs of the desired changes. A close interpersonal relationship is maintained by building trust, acceptance and support. All these would lead to development of faith among various groups of interrelated people. Since faith is said to be contagious, if developed once, is sure to have positive influence on the organizational development. This may also help the leaders to analyze their own behavior liberating them from unfounded pre-assumptions, utilizing their time in constructive work and making desirable change in their attitude towards the people working along and under them.

Hence the issue now comes to the psychological drive or force that directs someone towards individual and or organization’s objectives by enhancing Quality of Work Life. A hospital manager has to have an understanding of the way people behave in the organization and what are their inner motives or drives. The interrelationship between their needs, drives and goals. Understanding these would help to understand the work-attitudes of each and every person attached to the organization.

Conclusion:

For one thing, doctors aren’t comfortable with uncertainty. Managers have to be comfortable with it. Managers deal with organizations, doctors primarily manages individuals. It always starts with the desire to become a better doctor. But learning from both the disciplines will lead to completeness. Combining the two is a matter of expanding your tool-kit - among others would be better interpersonal skills, change management, social entrepreneurship, systemic thinking, financial savvyness, resource allocation, strategic thoughts, etc.

Final message is that the new breeds of doctors are the outstanding clinicians. With proper managerial skills, they can be more dynamic future leaders, social catalysts and we and the world can cherish a different reborn doctor.
Recurrent abdominal pain:

- Recurrent abdominal pain in children described originally by Apley is defined as paroxysmal abdominal pain occurring between the ages of 4 and 16 years and has experienced at least three bouts of pain severe enough to affect activities over a period of at least 3 months.

New Definitions:

- Chronic abdominal pain is defined as long-lasting intermittent or constant abdominal pain.
- Functional abdominal pain: without objective evidence of an underlying organic disorder.

Rome III criteria for pediatric functional gastro-intestinal disorders (FGID):

1. Functional dyspepsia
   - Persistent or recurrent pain or discomfort centered in the upper abdomen, above the umbilicus.
   - Not relieved by defecation or associated with the onset of a change in stool frequency or stool form (i.e., not IBS).
   - No evidence of inflammatory, anatomic, metabolic or neoplastic process that explains the symptoms.
   - Criteria fulfilled at least once per week for at least 2 months before diagnosis.

2. Irritable bowel syndrome
   - Abdominal discomfort (an uncomfortable sensation not described as pain) or pain associated with 2 or more of the following at least 25% of the time:
     - Improved with defecation.
     - Onset associated with change in frequency of stool.
     - Onset associated with change in form of stool.
   - No evidence of an inflammatory, anatomic, metabolic or neoplastic process that explains the symptoms.
   - Criteria fulfilled at least once per week for at least 2 months before diagnosis.

3. Abdominal migraine
   - Paroxysmal episodes of intense, acute peri-umbilical pain that last for 1 hr or more.
   - Interval periods of usual health lasting for weeks to months.
The pain intervenes with normal activity
- The pain is associated with 2 or more of the following:
  anorexia, nausea, vomiting, headache, photophobia, pallor
- Criteria fulfilled 2 or more times in the preceding 1 year.

4. **Functional abdominal pain**
   - Episodic or continuous abdominal pain
   - Insufficient criteria for other FGIDs.
     This is NOT the same as saying the pain is non-organic
     - However non-organic or psychogenic term is sometimes used
       - Growing body of evidence that points to a disordered brain-gut communication as the cause

**Prevalence**
Has been reported to occur in 10-15% of children.
Usually two peak periods
- 5-7 yrs (beginning of school and separation issues) - both boys and girls
- 9-12 yrs - girls more than boys. Many have a family history of functional bowel disease

**R.A.P. With Dyspepsia**
- Pseudo-obstruction - Pancreatitis - IBD - Giardia, Blastocystis hominis
- HSP - Chronic hepatitis - Cholecystitis - Abdominal migraine - Psychiatric

Key to deciding the extent of the initial workup is the presence or absence of vomiting.
- In addition to the previous tests H. Pylori infection should also be ruled out.
- If vomiting is a significant part of the history a barium swallow, barium meal with small bowel follow through should be done. Endoscopy should also be considered.

If the time criterion for R.A.P. has not been met and you are proceeding with the workup, try acid-reducing agents as an empiric therapy as long as the symptoms are consistent with dyspepsia. Once you are close to the time criteria you should introduce R.A.P. as a potential diagnosis.

**H. pylori**
Incidence in children increases with age
- Positive relation between disease and low socioeconomic status and high density living
- Increases in families in which an adult has had an ulcer or documented H. pylori.
- If the serologic testing is positive, then treatment with triple therapy is indicated- 2 antibiotics and an acid blocker

**R.A.P. with Altered Bowel Pattern**
- IBD- Crohn’s or U.C.
- Infectious disorders - Parasitic (Giardia, Blastocystis, Dientamoeba)
- Bacterial (C. diff, Yersinia, Campylobacter)
  ● Lactose or Fructose intolerance ● Complication of constipation
  ● Obs/Gynae disorders ● Neoplasia ● IBS
  ● The key to deciding on the extent of the initial workup is:
    - The volume/timing of diarrhea vs. degree of constipation
    - Evidence of gross or occult blood in the stool
    - The presence of encopresis

Indications for Colonoscopy
  ● Evidence of GI bleeding ● Profuse diarrhea
  ● Involuntary weight loss or growth deceleration ● Iron deficiency anemia
  ● Elevated ESR or CRP ● Extra-intestinal symptoms suggestive of IBD
    - Rash, joint pains, aphthous ulcerations

Isolated R.A.P.
  ● Crohn’s disease ● Malrotation ● Intussusception
  ● Postsurgical ● Musculoskeletal disorders
  ● Abdominal migraine, adhesions ● Obs/Gynae
    - Dysmenorrheal
    - Endometriosis
  ● Infection
    - Yersinia
  Vascular disorders
    - Mesenteric thrombosis, Polyarteritis nodosa, Acute intermittent porphyria
  ● Mental disorders
    - Factitious, conversion, somatization, school phobia
  ● Functional abdominal pain

Diagnosis of F.A.P.
  If this diagnosis is suspected then even more time should be spent on the social history to help determine the trigger.
    - Any deaths of family members or friends?
    - Serious illness in family, friends or schoolmates?
    - Recent parental separation, change of school or potential of either?
    - Has the child started a new school?

Treatment of F.A.P.
  ● Reassurance
  ● Dietary management as increase fibre content of diet and decrease in carbonated drinks and sweetners
Anti-cholinergics as dicyclomine, hyoscyamine
Selective serotonin reuptake inhibitors
Tricyclic antidepressants
5HT3 antagonists as ondansetron, granisetron.
Psychological therapy as cognitive behavioral therapy, relaxation training, hypnotherapy.

Attention deficit hyperactivity disorder:
One of the most common neurobehavioral disorders
Characterized by
Inattention, Hyperactivity and Impulsivity
It is a major public health problem prone to have a lifelong impact on the child, his family, his school and the society

Nomenclature
First described by Still in 1902
Reconceptualised in DSMII (diagnostic and statistical manual of mental health diseases) in 1968
Latest Revision in 1994 DSMIV
Three subtypes-
1) Predominant Inattention-ADHD-IA
2) Predominant Hyperactivity/Impulsivity-ADHD-HI
3) Combination of the two-ADHD-Combined

Epidemiology
Western studies- 2-12% of school age children affected
Few Indian studies are available which show 5-10% school age children are affected
Boys are affected more than girls, 4-6:1 ratio
Etiology and Pathogenesis
Combined effect of a complex genetic disorder with interactions with the Environment
PET imaging support the notion that catecholamine dysregulation is central to the pathophysiology of this disorder.
Evidence of structural differences in the brains in children and adults with ADHD
Predisposing environmental factors include very low birth weight, exposure to tobacco, head trauma and lead toxicity.

Clinical Features
Inattention
Careless with detail Fails to sustain attention Appears not to listen
Does not finish instructed task Poor self-organization
Avoids tasks requiring sustained mental effort ● Loses things
- Easily distracted ● Seems forgetful
- **Hyperactivity/Impulsivity**
- Fidgets.
- Leaves seat when should be seated.
- Runs/Climbs excessively and inappropriately.
- Noisy in play.
- Persistent motor over activity unmodified by social context.
- Blurts out answers before question completed.
- Fails to wait turn or queue.
- Interrupts others’ conversations or games
- Talks excessively for social context.
- At least 6 of these criteria must be persistently present for 6 months
- Some symptoms must be present before 7 years of age
- Impairments must be present in 2 or more settings (home, work, school)
- Impairments must be significant enough to affect his social, academic and occupational functioning.
- ADHD should not be diagnosed if it presents only concomitantly with a pervasive developmental disorder and psychotic disorder.

**Co-morbidities**
- Oppositional defiant disorder or conduct disorder, learning disability, depression, anxiety, bipolar disorder.

**Management**
- ADHD has consequences throughout a child’s life
- It affects all major institutions of society: individuals, families, workplace, school, medical systems, social service institutions and the juvenile justice system
- Medications, parental guidance, counseling and psycho education are cornerstones of treatment of ADHD.

**AUTISM:**
- Autism is a disorder of early brain development before three years of age affecting the development of language, communication, social interactions and range of interests.

**Pervasive Developmental Disorders**

**Autistic Spectrum Disorders**
(DSM-IV-TR)
- Classical autism ● Asperger Disorder ● Childhood Disintegrative Disorder
- Rett disorder ● Pervasive Developmental Disorder not otherwise specified
Epidemiology
- Prevalence estimates of autism range from 2-6 per 10000 children.
- Boys>Girls Ratio- 3:4:1

Etiology and Pathogenesis
- Cause is not known
- A polygenetic origin with environmental triggers
- Chromosomes of interest include 1q, 2, 7q, 15, 16p and 17p
- Environmental factors--Congenital infections, exposure to drugs such as thalidomide, mercury in vaccines or fish. MMR vaccine etc.

Clinical features
The earliest signs of autism are
- absence of smiling,
- poor eye contact and
- failure to make meaningful gestures by one year of age.
- Impairments in both verbal and non-verbal communication in both receptive and expressive domains.
- Restricted, repetitive and stereotypic patterns of behavior, interests and activities.
- May have mental impairment and early onset seizure disorder.

Differential Diagnosis
Differentiation from other ASDs (Autism spectrum disorder)
- More severe deficits in communication skills than other ASDs
- Asperger Syndrome- Presents late and has relatively intact language skills
- CDD; childhood disintegrative disorder- Initial normal development followed by regression
- Rett syndrome- Also shows normal development followed by regression. Also shows head growth deceleration and hand rubbing stereotypes.

Assessment
- Early identification and intervention have the best outcome.
- Developmental screening of all children should be carried out in early years and those who lag behind in language and social skills be screened using standarised scales such as Checklist for Autism in Toddlers (CHAT).

Absolute indications for further referral are
- no babbling or pointing by 12 months
- no single words by 16 months
- no two word spontaneous phrases by 24 months
- any loss of language or social skills at any age.
Evaluation

- Careful clinical history
- Mental status examination (IQ)
- Medical and neurological examination
- Academic assessment to develop an Individualised Education Plan (IEP).
- Audiological evaluation and BERA.
- Lead screening, EEG, neuroimaging, metabolic screening, genetic and allergy testing and celiac antibody levels

The final diagnosis is based on the parent interview, assessments and use of specific diagnostic instruments such as
- Childhood Autism Rating Scale (CARS),
- Autism Diagnosis Observation Scale (ADOS),
- Autism Behavior Checklist (ABC), and
- Gilliam Autism Rating Scale (GARS).

These rating scales are also valuable to monitor the treatment progress.

Management

- multidisciplinary and multimodal.
- a comprehensive treatment plan for home, at school, and also in the community
- by close collaboration of educational, medical and psychiatric professionals.
- The primary goals of treatment are-
  - To promote communication development
  - To enhance and support social and academic skills
  - To decrease behavioral difficulties
  - To decrease stress in the family

- Interventions should include parental education, family support, parent training in behaviour management, special education planning, and referral for rehabilitative therapies and disability services as indicated.
- No specific pharmacologic treatment for autism.
- No evidence for alternative treatment modalities.
- Parental involvement is a major factor in treatment success.
Nigeria is now free of Ebola virus transmission

The lines on the tabular situation reports, sent to WHO each day by its country office in Nigeria, have now been full of zeros for 42 days.

WHO officially declares that Nigeria is now free of Ebola virus transmission.

This is a spectacular success story that shows that Ebola can be contained. The story of how Nigeria ended what many believed to be potentially the most explosive Ebola outbreak imaginable is worth telling in detail.

Such a story can help many other developing countries that are deeply worried by the prospect of an imported Ebola case and eager to improve their preparedness plans. Many wealthy countries, with outstanding health systems, may have something to learn as well.

The first Ebola case, in Lagos, was announced on 23 July, the news rocked public health communities all around the world. Nigeria is Africa’s most populous country and its newest economic powerhouse.

For a disease outbreak, it is also a powder keg. The number of people living in Lagos - around 21 million - is almost as large as the populations of Guinea, Liberia and Sierra Leone combined.

Lagos, Africa’s largest city, is also characterized by a large population living in crowded and unsanitary conditions in many slums.

Thousands of people move in and out of Lagos every day, constantly looking for work or markets for their products in a busy metropolis with frequent gridlocks of vehicle traffic.

“How can contact tracing be done under such conditions?” This was the main concern raised at the beginning, shortly after the first confirmed case was announced.

As the United States Consul General in Nigeria, Jeffrey Hawkins, said at the time, “The last thing anyone in the world wants to hear is the 2 words, ‘Ebola’ and ‘Lagos’ in the same sentence.” As he noted, that single juxtaposition conjured up images of an “apocalyptic urban outbreak”.

That never happened. With assistance from WHO, the US Centers for Disease Control and Prevention (CDC), and others, government health officials reached 100% of known contacts in Lagos and 99.8% at the second outbreak site, in Port Harcourt, Nigeria’s oil hub.

Federal and State governments in Nigeria provided ample financial and material resources, as well as well-trained and experienced national staff.

Isolation wards were immediately constructed, as were designated Ebola treatment facilities, though more slowly. Vehicles and mobile phones, with specially adapted programmes, were made available to aid real-time reporting as the investigations moved forward.

Unlike the situation in Guinea, Liberia and Sierra Leone, all identified contacts were physically monitored on a daily basis for 21 days. The few contacts who attempted to escape the monitoring system were all diligently tracked, using special intervention teams, and returned to medical observation to complete the requisite monitoring period of 21 days.
The “index” case: how it all started
- The Ebola virus entered Lagos on 20 July via an infected Liberian air traveller, who died 5 days later. At the departure airport, he was visibly very ill, lying on the floor of the waiting room while awaiting the flight.
- He vomited during the flight, on arrival and, yet again, in the private car that drove him to a private hospital. The protocol officer who escorted him later died of Ebola.
- At the hospital, he told staff that he had malaria and denied any contact with an Ebola patient. As was learned later, his sister was a confirmed case who had died from the disease in Liberia. The traveller visited his sister while in hospital and attended her traditional funeral and burial ceremony.
- As malaria is not transmitted from person to person, no staff at the hospital took protective precautions. Over the coming days, 9 doctors and nurses became infected and 4 of them died.

The second outbreak site: Port Harcourt
- The virus entered the country’s oil hub, Port Harcourt, on 1 August, when a close contact of the index case flew there seeking care from a private physician. That doctor developed symptoms on 10 August and died of Ebola on 23 August. Laboratory tests confirmed the city’s first case on 27 August.
- An investigation undertaken by a team of epidemiologists from the Nigerian Centre for Disease Control (NCDC), the Nigeria Field Epidemiology and Laboratory Training Programme and the State Ministry of Health, assisted by WHO, revealed an alarming number of high-risk and very high-risk exposures for hundreds of people.
- Again, all the ingredients for an explosion of new cases were in place. Dr Rui Vaz, the head of WHO’s country office in Nigeria, visited Rivers State (where Port Harcourt is located) to assess the situation there. He informed the State’s Governor of the potentially explosive situation and made his advice crystal clear: “All required resources must be immediately mobilized to stop this outbreak.”
- Again, that explosion never happened. Fortunately, the State’s Governor heeded WHO’s advice.
- Today, exactly 42 days (twice the maximum incubation period for Ebola virus disease) after the country’s last infectious contact with a confirmed or probable case occurred, the chains of transmission have been broken.

What accounts for this great news?
To a large extent, the answer is straightforward: the country’s strong leadership and effective coordination of the response. The Nigerian response to the outbreak was greatly aided by the rapid utilization of a national public institution (NCDC) and the prompt establishment of an Emergency Operations Centre, supported by the Disease Prevention and Control Cluster within the WHO country office.

Another key asset was the country’s first-rate virology laboratory affiliated with the Lagos University Teaching Hospital. That laboratory was staffed and equipped to quickly and reliably diagnose a case of Ebola virus disease, which ensured that containment measures could begin with the shortest possible delay.
In addition, high-quality contact tracing by experienced epidemiologists expedited the early detection of cases and their rapid movement to an isolation ward, thereby greatly diminishing opportunities for further transmission.

**How a highly contagious virus was stopped dead in its tracks**

Dr Rui Vaz and the WHO country team of epidemiologists, clinicians, logisticians and administrators have identified a number of specific lessons that may be useful for other countries facing their first imported Ebola case or preparing for one. They have also carefully documented a large number of “best practices” for containing an Ebola outbreak quickly.

The most critical factor is leadership and engagement from the head of state and the Minister of Health. Generous allocation of government funds and their quick disbursement helped as well. Partnership with the private sector was yet another asset that brought in substantial resources to help scale up control measures that would eventually stop the Ebola virus dead in its tracks.

Health and government officials fully appreciated the importance of communication with the general public. They rallied communities to support containment measures.

House-to-house information campaigns and messages on local radio stations, in local dialects, were used to explain the level of risk, effective personal preventive measures and the actions being taken for control. On his part, the President reassured the country’s vast and diversified population through appearances on nationally televised newscasts.

The full range of media opportunities was exploited - from social media to televised facts about the disease delivered by well-known “Hollywood” movie stars.

**Polio strategies “repurposed” for Ebola control**

For some time now, with dedicated and enthusiastic support from President Goodluck Jonathan, Nigeria has been running one of the world’s most innovative polio eradication campaigns, using the very latest satellite-based cutting-edge GPS technologies to ensure that no child misses out on polio vaccination.

The country, which passed through the high-transmission season with only 1 single case of polio detected by a finely-tuned and sensitive surveillance system, is on track to interrupt wild poliovirus transmission from its borders before the end of this year.

When the first Ebola case was confirmed in July, health officials immediately repurposed polio technologies and infrastructures to conduct Ebola case-finding and contact-tracing.

The use of cutting-edge technologies, developed with guidance from the WHO polio programme, put GPS systems to work as support for real-time contact tracing and daily mapping of links between identified chains of transmission.

This is a good public health story with an unusual twist at the end. As part of preparedness for an imported case, several advanced countries with good health systems are now studying technologies “made in Nigeria”, with WHO support, to improve their own contact tracing capacities.

The story has another very clear message, as noted by Dr Margaret Chan, the WHO Director-General. “If a country like Nigeria, hampered by serious security problems, can do this - that is, make significant progress towards interrupting polio transmission, eradicate guinea-worm disease and contain Ebola, all at the same time - any country in the world experiencing an imported case can hold onward transmission to just a handful of cases.”
World-class epidemiological detective work would eventually link every single one of the country’s 19 confirmed cases back to direct or indirect contact with that 20 July air traveller from Liberia.

In another strategy, traditional, religious and community leaders were engaged early on and played a critical role in sensitizing the public. Like many others, the strategy drew on successful experiences in the polio programme.

The awareness campaigns that worked so well to create public acceptance of polio immunization were likewise repurposed to encourage early reporting of symptoms, backed by the message that early detection and supportive care greatly increase an Ebola patient’s prospects of survival.

All of these efforts were supported by social mobilization experts from UNICEF, CDC and Médecins sans Frontières, while the staff from the WHO Nigeria office, the Regional Office for Africa and headquarters boosted outbreak investigation, risk assessment, contact tracing and clinical care.

In the end, Nigeria confirmed a total of 19 cases, of whom 7 died and 12 survived, giving the country an enviable case fatality rate of 40% - much lower than the 70% and higher seen elsewhere.

Finally, to help maintain the confidence of citizens and foreign companies and investors alike, the government undertook the screening of all arriving and departing travellers by air and by sea in Lagos and Rivers State. The average number of travellers screened each day rose to more than 16000.

Vigilance remains high

Nigerian government and health officials, including staff in the WHO country office, are well aware that the country will remain vulnerable to another imported case as long as intense transmission continues in other parts of West Africa.

The surveillance system remains on guard, at a level of high alert. Moreover, the country’s success, including its low fatality rate, has created another problem that calls for a high level of alert.

Many desperate people in heavily affected countries believe that Nigeria must have some especially good - maybe even “magical” - treatments to offer.

WHO’s Dr. Vaz and others see a real risk that patients and their families from elsewhere will come to Nigeria in their quest for first-rate, live-saving care.

Based on the experience gained from the response in the 2 affected States, the national preparedness and response plan has also been revised and refined.

This strengthened response plan further boosts confidence that Nigeria’s well-oiled machinery has a good chance of working miracles again should another traveller - by land, air or sea - carry the Ebola virus across its borders again

Acknowledgement-Public Domain of World Health Organization
AUTOIMMUNE ENCEPHALITIS

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Sarmistha Mukhopadhyay Sr. DMO/P
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Introduction

Limbic encephalitis (LE) was first described by Brierley in 1960 and was characterized as an inflammatory disorder involving the hippocampi, amygdala, frontobasal and insular regions. The most common spectrum of symptoms of LE are characterized by a subacute progressive impairment of short-term memory, psychiatric features, confusion, personality changes, seizures and often hippocampal abnormalities on brain MRI. Although in some cases it appears to exclusively involve limbic regions, it has become clear that several clinical features implicate involvement of areas other than the limbic system. For this reason, currently the term autoimmune encephalitis (AIE) is preferred.

Previously, AIE was regarded as a rare disorder of paraneoplastic origin which usually had a poor prognosis. But currently, most forms AIE are detected to be non-paraneoplastic and a substantial portion respond to immunotherapy, particularly if treated promptly. Hence a lot of interest has been generated in the physicians to diagnose this group on AIE.

But, due to a broad differential diagnosis, the recognition of AIE is frequently difficult and delayed. The aim of this article is to facilitate recognition of the clinical features and to simplify the diagnostic approach, with the ultimate objective of rapid immunotherapy administration.

Neuronal intracellular antigens were known for a long time and they were associated with classical paraneoplastic AIE, which were less responsive to treatment. But with the discovery of CNS disorders associated with antibodies against neuronal synaptic intracellular antigens and neuronal cell surface/synaptic receptors antigens, a paradigm shift in the diagnosis of AIE has come to clinical medicine. The AIE associated with these two types of antigens sometimes may be paraneoplastic but mostly non-paraneoplastic and responsive to immunotherapy. All the 3 types of antigens and diseases produced by them have shown in the boxes (1-3) below.

<table>
<thead>
<tr>
<th>Neuronal Intracellular Antigens</th>
<th>Neuronal Synaptic Intracellular Antigens</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Usually Paraneoplastic]</td>
<td>[Less commonly Paraneoplastic]</td>
</tr>
<tr>
<td>Hu D</td>
<td>GAD 65</td>
</tr>
<tr>
<td>Ri</td>
<td>Ampiphysin</td>
</tr>
<tr>
<td>Yo</td>
<td></td>
</tr>
<tr>
<td>CRMP5</td>
<td></td>
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<tr>
<td>Ma 2</td>
<td></td>
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</tbody>
</table>

Usually present in older with

Box 1  Encephalomyelitis, Cerebellar degeneration, Sensory ataxia, Chorea.

Box 2  Stiff-person syndrome, Limbic encephalitis,
As described in the Box 1-3, there are host of autoantibodies which can produce AIE and more and more are being discovered. Although many features are common, each different autoantibody is associated with some peculiar manifestation of AIE. It is beyond the scope of this article to describe the details of each antibody producing different symptomatology in AIE. However, we will discuss in short the most commonly seen autoantibodies producing primary nonparaneoplastic AIE.

As shown in Box 3, autoantibodies on neuronal cell surface called Neuronal Surface antibodies (NSAbs), and the neurological manifestations associated with them as “neuronal surface antibody syndromes” (NSAS). These syndromes are often nonparaneoplastic and immunotherapy has a potential role in their management. Among the NSAbs, Leucine-rich glioma inactivated 1 (LGI1), Contactin-associated protein-like 2 (CASPR2) (which together also called Voltage Gated Potassium Channel (VGKC) complex-associated antibody) and N-methyl-D-aspartate receptor (NMDA) receptor antibody mediated AIE are very typical and in India commercial testing of these autoantibodies (LGI1, Caspr2 and NMDA receptor) are available.

**VGKC complex-associated antibody mediated AIE**

It has been recently recognized that VGKC antibodies are directed to particular components of the VGKC-complex, rather than the whole complex, most commonly LGI1 and CASPR2. In VGKC-complex associated AIE, most antibodies are directed against LGI1, but a minority have CASPR2 antibodies.

Hence the AIE associated with LGI1 antibodies called LGI1 antibody mediated AIE. This disease is seen in age group of 30-80 years (median 60 years) with 65% occurrence in males. Patients classically present with Faciobrachial Dystonic Seizures (FBDS), LE, epilepsy (often tonic seizures), myoclonus, rapidly progressive dementia (can mimic Creutzfeldt-Jakob disease or CJD) and sleep disorders. The FBDS are very brief (usually <3 seconds) and very frequent, always involve the arm and commonly also the ipsilateral face and leg. The trunk is also involved in some cases. Hand involvement caused many patients to drop items within their grasp. In many patients, FBDS could involve either side but were always unilateral on any occasion. Many patients produce vocalizations at the start of the FBDS. In some patients, the FBDS can be triggered by auditory stimuli or high emotion. Overnight recordings, when performed, identify some FBDS during sleep. There is no family history of similar episodes. The use of the terminology “seizures” has been deemed controversial as there are often no EEG correlates to these events. This presentation most often precedes the development of a more classical LE, and is an important differential in patients with rapidly progressive dementia. A proportion of patients can have spontaneous remission without therapy. Other patients may have a variable response to anticonvulsant therapy, and some patients are refractory to anticonvulsants but eminently treatable with immunotherapy, with early therapy
shown to prevent evolution to complete LE. In LGI1 complex mediated AIE, CSF may be unremarkable but in 40% patients it may demonstrate a lymphocytic pleocytosis, elevated protein level, or oligoclonal bands. MRI brain in 85% of patients show medial temporal lobe FLAIR high signal. Another distinguishing feature is the presence of hyponatremia in around 50% of cases, usually with a SIADH pattern. Only a few (<20%) LGI1 antibody positive patients have tumours, typically small cell lung carcinoma (SCLC) or thymoma. In contrast to NMDAR-antibody positive AIE patients, relapses are unusual in those with antibodies against VGKC-complexes.

Caspr2 antibodies are associated with AIE, peripheral nerve hyperexcitability (cramps and fasciculations) or neuromyotonia (Isaacs’ syndrome), and Morvan syndrome. Peripheral nervous system involvement may precede or follow those in the central nervous system, in some cases by several years. Commonest age at presentation vary from 45-80 years (median 60 years). CSF is usually bland. MRI in 40% shows medial temporal lobe FLAIR high signal. Some patients with these antibodies have thymoma, but most do not have tumors. Response to immunotherapy is relatively good in most patients. Morvan syndrome is most commonly charaterised by neuromyotonia (100%), neuropsychiatric features (insomnia, confusion, amnesia, hallucinations), dysautonomia (hyperhidrosis, cardiovascular), and neuropathic pain. CASPR2 antibodies have also been identified in 10% of patients with idiopathic cerebellar ataxia.

**NMDA receptor antibody mediated AIE.**

This appears to be one of the most frequent type of AIE. It was initially described in young women with ovarian teratomas, of which 70% were benign. It is now known that it also frequently affects men and children. The characteristic clinical picture starts with a psychotic stage (many patients are initially seen by psychiatrists) and seizures, followed by altered sensorium, autonomic instability (including fluctuation of blood pressure, temperature, heart rate, cardiac pauses and diaphoresis) and movement disorders, namely dyskinesias. The oral-lingual-facial dyskinesias are the most characteristic, but other abnormal movements, such as opisthotonic postures and a catatonic state, may also occur. A curious feature is a dissociative response to stimuli like- patients may resist eye opening, but show reduced or absent response to painful stimuli. Invasive ventilation and admission to an intensive care unit are frequently necessary. Unlike LGI 1 antibody mediated AIE, disease relapses may occur in 15-25% of cases, especially in non-paraneoplastic cases without adequate immunotherapy during their previous encephalitic episode. CSF typically reveals an early lymphocytic pleocytosis followed by intrathecal synthesis of antibodies. The MRI is frequently normal, however changes can be seen in medial temporal lobes and in white matter. The diagnosis of this disorder is based on the demonstration of Anti-NMDA Receptor (NR1) IgG antibodies in serum or CSF. No other specific tests have been identified but two recent studies indicate that some EEG and brain FDG-PET abnormalities may potentially be useful. One study showed that 7 of 23 (30%) adult patients had a unique EEG pattern that the authors named “extreme delta brush” (EDB) due to its resemblance to the delta brush EEG pattern seen in premature infants. EDB pattern of patients with anti-NMDAR encephalitis consists of a nearly continuous combination of delta activity (1-3 Hz) with superimposed fast activity (20-30 Hz) usually in the [beta] range; it is most often symmetric and synchronous, and is detected broadly across all head regions with predominance in frontal regions. In all patients studied, this pattern was present continuously from the earliest available EEG, did not vary with sleep-wake cycles, and did not change significantly with stimulation or level of arousal. Detection of the EDB pattern significantly associated with prolonged hospitalization; the pattern resolved when the patients improved. Another study showed that patients with anti-NMDAR encephalitis had relative frontal and temporal glucose
hypermetabolism associated with occipital hypometabolism. This gradient of brain glucose metabolism correlated with clinical disease severity, and normalized when the patients recovered. Given that similar changes have been observed in psychosis induced by NMDAR antagonists, the FDG-PET pattern is likely a consequence of impaired NMDAR function.

Anti-NMDAR encephalitis should be included in the differential diagnosis of all patients presenting with findings of “viral encephalitis”—regardless of age or sex. NMDA receptor antibody mediated AIE may overlap with white matter disease of brain like acute disseminated encephalomyelitis (ADEM) and neuromyelitis optica (NMO). Relapsing post herpes simplex virus (HSV) encephalitis, specially those who present with chorea with other features of encephalitis, may be due to NMDA receptor antibody encephalitis. Most relapses with chorea occur 1.5 to 4 weeks after the initial illness of HSV encephalitis, and the lack of HSV replication (Repeat HSV1 antibody in CSF being negative) and appearance of anti NMDA receptor antibody has led to the hypothesis that post-infectious autoimmunity against NMDA receptors is operating to produce NMDA receptor encephalitis in relapsing type of encephalitis. NMDA receptor antibody also react with Dopamine 2 receptor (D2R) which produces chorea during relapse of encephalitis.

Disorders associated with neuronal cell surface/synaptic receptors antigens are shown in Table 1.

<table>
<thead>
<tr>
<th>ANTIGEN</th>
<th>SYNDROME &amp; MAIN FEATURES</th>
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<tbody>
<tr>
<td>NMDAR</td>
<td>Anti NMDAR encephalitis</td>
</tr>
<tr>
<td>AMPAR</td>
<td>Limbic encephalitis, psychosis</td>
</tr>
<tr>
<td>GABA-B R</td>
<td>Limbic encephalitis with predominant seizure, status</td>
</tr>
<tr>
<td>LGI1</td>
<td>Limbic encephalitis, myoclonus, hyponatrimia</td>
</tr>
<tr>
<td>CASPR2</td>
<td>Encephalitis and/or neuromyotonia</td>
</tr>
<tr>
<td>mGluR5</td>
<td>Ophelia syndrome</td>
</tr>
<tr>
<td>DPPX(Kv4.2)</td>
<td>Hallucination, agitation, myoclonus, tremor, seizure, diarrhea</td>
</tr>
<tr>
<td>mGluR1</td>
<td>Cerebellitis (+/- Hodgkin's disease)</td>
</tr>
<tr>
<td>Glycine R</td>
<td>Stiff-person syndrome, hyperekplexia, PERM</td>
</tr>
<tr>
<td>Dopamin(D2) R</td>
<td>Basal ganglia encephalitis, Sydenham's chorea</td>
</tr>
<tr>
<td>GABA-A R</td>
<td>Status epilepticus, refractory seizure</td>
</tr>
<tr>
<td>Iglon5</td>
<td>“NREM and RBD with sleep-breathing dysfunction; novel tauopathy”</td>
</tr>
</tbody>
</table>

Table 1. Disorder of synaptic/cell surface autoimmunity. NREM-Non Rapid Eye Movement, RBD-REM sleep Behavioral Disorder. Adapted from Ref 2.

When to suspect AIE?

When a patient presents with impairment of short-term memory, usually developing over weeks or months, psychiatric symptoms (irritability, depression and hallucinations), mesiotemporal seizures (complex partial seizure) and other associated neurological features, which often reflect the presence of particular type of antibodies (already discussed), one should suspect AIE.

How to approach to AIE

As AIE has a wide differential diagnosis, one way of trying narrow-down the possibilities is to create a rational plan of investigations guided by an accurate clinical history, in an attempt to identify the key points already described. First step is to consider other treatable/known disorders,
such as viral encephalitis (herpes simplex encephalitis), Creutzfeldt-Jakob disease, Neurosyphilis, HIV infection, metabolic/toxic encephalopathy (including Wernicke encephalopathy), Hashiomyoto’s encephalophathy, primary CNS tumor (glioma, lymphoma) and cerebral metastases, autoimmune encephalopathies (Sjogren’s syndrome, SLE, Behcet’s disease—all of which mostly have systemic features), etc. One has to undertake necessary investigations to exclude these disorders.

Once the exact cause of encephalopathy could not be determined by appropriate investigations, one should search from be the basic workup of AIE which includes:

1. **MRI** - Normal/signal changes of medial temporal lobes, best seen in T2 & FLAIR images
2. **CSF** - Normal/typically with inflammatory changes as lymphocytic pleocytosis, high protein and oligoconal bands
3. **EEG** - often showing diffuse slowing and sometimes more focal or generalised epileptiform changes, extreme delta brush in anti-NMDAR AIE
4. To detect the autoantibodies either in serum or CSF. In almost all patients, serum shows higher concentrations of antibodies than CSF. It is worth discussing the preferred sample with the diagnostic laboratory as the methods of detection may determine the sample of choice. As there is a constant discovery of new antibodies and an increasing heterogeneity regarding the clinical picture, it may be tricky to decide which antibody to test. Currently two antibodies are being tested in laboratories in India: i) NMDA receptor antibody and ii) Voltage Gated Potassium channel (VGKC) antibodies (LG1 & CASPR2)
5. Once the diagnosis of AIE is established, a comprehensive investigation to exclude an underlying neoplasm should be considered in all cases. In 60-70% of the paraneoplastic cases, the neurological picture precedes the symptoms related to the tumor. So screening with body imaging such as a CT and/or a PET scan is warranted. Additionally, testicular ultrasound in men and mammography/mammary ultrasound in women should be performed when appropriate. After exclusion of tumor one should diagnose Nonparaneoplastic AIE.

**Treatment of AIE**

Once AIE is considered likely, treatment should be started promptly. Also, a trial of immunotherapy may serve as a valuable “diagnostic test”. However, some conditions are typically refractory to initial immunotherapy administration (e.g. NMDAR AIE), and the trial should not be considered definitive proof as to the immune aetiology of the illness.

If there is an identified neoplasm, its removal may be important for the neurological improvement. However, in traditional paraneoplastic cases associated with intracellular antibodies, there is rarely a favorable response to this approach even with immunotherapies. On the other hand, those cases of AIE associated with membrane antibodies may have a good response to immune interventions, plus tumor removal when indicated. Intravenous immunoglobulin (IVIg), plasma exchange (PE), corticosteroids, cyclophosphamide and rituximab have all been used with success. A typical strategy for therapy is IV methylprednisolone (1 g IV daily for 3-5 days) with either IVIG (0.4-1 g/kg IV daily for 3-5 days) or PE, usually followed by oral prednisolone. If there is no or only a limited response, or there is a relapse (usually in NMDAR antibody AIE in 15-25% patients) some authors advocate second-line therapies, such as rituximab and/or cyclophosphamide.

**Conclusion.**

Nonparaneoplastic AIE is relatively new disorder. Lack of antibody testing makes clinician’s judgment unfulfilled. Although expensive, as discussed, LG1, CASPER2 and NMDAR antibody are being tested in India. One has to remember AIE as differential diagnosis of patient presenting with a feature of encephalitis where other common conditions are excluded. One can utilise the knowledge of clinical features of different varieties of AIE to arrive at a proper diagnosis. However, whenever AIE is suspected, one has to exclude presence of tumor by appropriate investigations.
DEPARTMENT OF NEUROLOGY

- Apart from General Neurology clinic, The Movement Disorders Clinic and Epilepsy Clinic has yielded very fruitful results in the treatment of patients suffering from Parkinson’s Disease, Essential Tremor, Dystonia, Intractable Epilepsy etc. These patients need lot of time for examination, management and counseling. Most of the patients got very good result after introduction of these 2 clinics over 3 years.
- The Botulinum Toxin clinic, which is unique in Indian Railways now having more than 200 patients who are getting the injection regularly.

Dr. Bhaskar Ghosh, ACHD/Neurology has done the following:
1. Has been a Founder member of Movement Disorders Society of India
2. Has been elected an Executive commitee member of Association of Physicians of India WB branch for the year 2014-2016.
3. Has been elected an Executive commitee member of IRA WB branch for the year 2015-2017.
4. Has been awarded Fellowship of Indian College of Physicians (FICP) by The Indian College of Physicians
5. Regularly taking Post Graduate Neurology classes in BRSH where MD and DNB students of different Medical Colleges attend
7. Presented interesting cases at the Movement Disorders Forum meeting.
8. Delivered a lecture on ‘Autoimmune Encephalitis’ at Association of Physicians of India (API) North Bengal chapter Annual Conference held at Siliguri.
9. Delivered a lecture on ‘Parkinson’s disease Dementia’ at a seminar on Dementia, organised by Associations of Physicians of India (API), WB branch
10. Chaired a session on ‘Ambulatory BP monitoring’ organised by Hypertension Society of India
11. Chaired a session in the East Zone Association of India (API) conference entitled “Migraine and Stroke”
12. Delivered a lecture on ‘Parkinson’s Disease and management of Early Parkinson’s disease’ at Ramkrishna Mission seva pratisthan and Vevekananda Institute of Medical Sciences (VIMS), Kolkata
13. Took a mock examination of MD(Medicine) students at Ramkrishna Mission seva pratisthan and Vevekananda Institute of Medical Sciences (VIMS), Kolkata
14. Chaired a session entitled ‘Dystonia’ at Movement Disorders Update organised by Institute of Neurosciences, Kolkata
15. Chaired a session on “Eye Movement Abnormalities in Movement Disorders” and conducted a workshop on Botulinum Toxin Injection at International Update on Movement Disorders, organised at Siliguri
INTRODUCTION.
Hyperuricemia is a level of uric acid in the blood that is abnormally high. In humans, the upper end of the normal range is 360 µmol/L (6 mg/dL) for women and 400 µmol/L (6.8 mg/dL) for men. The prevalence hyperuricemia varies from 9.2-35.2 % in men and 8.7-21.8 % in women in different studies in different parts of the world. As population ages, the gap between the genders decreases. Compared with women, men have a four- to ninefold increased risk of developing gout. Women often do not develop gout until they reach menopause, when the uricosuric action of estrogens is lost. Because of changing dietary and other lifestyle habits, at least 1% to 2% of all adults in the industrialized nations are now affected by gout.

ETIOLOGY OF HYPERURICEMIA
About two-third of the urate is eliminated through urinary tract and one-third through gastrointestinal tract. Genetic and acquired renal acid under-excretion accounts perhaps for 90% of the cases of hyperuricemia. Another 10% is due to genetic overproduction. Alcohol can increase both uric acid production and decrease its excretion. Alcohol increases uric acid production by accelerating the turnover of adenosine triphosphate (ATP). Among alcoholic beverages, beer may have more potent effects on uric acid production because of its high guanosine content. Obesity and Type 2 diabetes with insulin resistance is also a pathophysiologic factor in abnormal uric acid metabolism. Some drugs also cause hyperuricemia (Table 1). Finally, a high purine diet like sea food and red meat cause hyperuricemia. Soft drinks which containing high fructose corn syrup is also an important source of hyperuricemia.

EFFECT OF HYPERURICEMIA
Asymptomatic hyperuricemia is a condition in which the serum urate level is high, but gout—manifested by arthritis, tophi or uric acid nephrolithiasis—has not yet occurred. Most people with hyperuricemia remain asymptomatic throughout their lifetimes. Sustained hyperuricemia predisposes some individuals to develop clinical manifestations including gouty arthritis, urolithiasis, and renal dysfunction. In the Framingham Study, 9.2% of men and 0.4% of women had hyperuricemia, and 19% of these suffered from gout. Conversely, 0.1 percentage of patients with gout have normal uric acid level (<7 mg/dl), 1.5% of patients with gout have mild hyperuricemia (7 to 8.4 mg/dl), over 12% incidence of gout in patients of moderate hyperuricemia (8.5 to 9.9 mg/dl), and about half of the patients eventually develop gout when there is severe hyperuricemia (>10mg/dl).

CO MORBIDITIES OF HYPERURICEMIA
There are some co morbidities that could be both screened for and treated are associated with hyperuricemia. These include hypertension, hyperlipidemia, diabetes, chronic kidney disease and...
An increased incidence of end-stage renal disease was found in patients with hyperuricaemia, but gout was not an independent predictor for this disease. However, a fourfold increase in mortality due to kidney disease has been reported in patients with gout compared with non-gouty patients. Although there are lack of prospective studies in patients with gout, hyperuricaemia may increase the risk of developing diabetes or hypertension. Although, there is lack of data to show that hyperuricaemia increases the risk of developing CHD or stroke, there are evidences to suggest that patients with gout have an increased risk of developing CHD as well as slightly increased risk of CHD-related mortality. Hypertriglyceridemia has been reported in 75% to 80% of patients with gout, and hyperuricemia is found in more than 80% of patients with hypertriglyceridemia. However, studies have been unable to show a correlation between serum urate and cholesterol values or a unique lipid phenotype. Gouty patients who drink alcohol excessively have mean serum triglyceride levels that are higher than those of their obesity-matched controls and of non-alcohol drinking gouty patients.

The term metabolic syndrome has been applied to a cluster of abnormalities, including resistance to insulin-stimulated glucose uptake, hyperinsulinemia, obesity, hypertension, and dyslipoproteinemia which is characterized by high levels of plasma triglycerides and low high-density lipoprotein cholesterol. Hyperuricemia closely correlates with the degree of insulin resistance and therefore, is a likely feature of metabolic syndrome. Based on these observations, in patients with hyperuricaemia and/or gout, renal function should be measured and assessment of cardiovascular risk factors as well as metabolic syndrome is recommended.

There appears to be a significant increased prevalence of hypothyroidism among both female and male patients with hyperuricemia and gouty arthritis. Thyroid replacement therapy is associated with a decrease in serum urate concentration caused by an increased uric acid diuresis—a change not explained solely by a change in creatinine clearance. Although the cause and effect of hyperuricemia in patients with hypothyroidism is unknown, it is speculated that urate metabolism is mediated by thyroid-stimulating hormone receptors in extrathyroidal tissues, including the kidney, and that these modulate urate homeostasis.

HYPERURICEMIA AND OSTEOARTHRITIS

Recently, a possibility has come up that uric acid may play a role in the development and progression of osteoarthritis (OA). There is a notion that uric acid crystals are a danger signal produced by damaged cells and can activate immune responses. Danger signals are substances that are emitted by cells in extremes and drive antigen presentation to result in immunity (as opposed to the antigen causing immune tolerance). Second, the ability of urate crystals to activate the inflammasome, a multimolecular complex responsible for the generation of IL-1β and IL-18. Interestingly enough, IL-1β is one of the cytokines most strongly associated with osteoarthritis. Denoble and colleagues studied the synovial fluid (SF) of 159 patients with OA but no gout. They found that: 1) SF urate levels correlated with levels of both IL-1β and IL-18; 2) SF IL-1β and IL-18 levels correlated with OA severity; and 3) SF urate levels also correlated with OA severity. One study has suggested an association between crystal deposition and OA of the ankle. Intriguingly, Aran and colleagues have recently shown that daily colchicine reduces osteoarthritis symptoms in the knee. Taken together, these data are provocative and suggest that further research is warranted to define whether uric acid can be more definitively linked to the progression of OA, the presence or risk of OA may need to be taken into consideration when making decisions to lower serum urate pharmacologically.
HOW TO MANAGE ASYMPTOMATIC HYPERURICEMIA

Pharmacological treatment of asymptomatic hyperuricaemia is not recommended to prevent gouty arthritis, renal disease or cardiovascular events as there are absence of evidences supporting the use of urate lowering therapy for asymptomatic hyperuricaemia with or without normal renal function.18-20 But experts agree that lifestyle advice on diet, weight loss or exercise would apply to patients with asymptomatic hyperuricaemia, especially after considering the increased risks arthritis, renal disease or cardiovascular events.21

Dietary modification can lead to maximum 1mg or 15% reduction of uric acid level. It is generally advocated that patients with hyperuricemia should avoid seafood including sea fish, red meat, alcohol (beer contraindicated) and soft drinks containing high fructose corn syrup. On the contrary, dairy products and cherry help to reduce hyperuricemia. There is no bar in eating cabbage, cauliflower, tomato, peanut, spinach, mushroom, lentils, etc as they contain very little purine. Fruits are also welcome. Vitamin C reduces serum uric acid level.

CONCLUSION

Hyperuricemia is a global problem. With changing food habit and lifestyle, this is really a burning problem in our country. Hyperuricemia predisposes to gout, tophi formation, nephrolithiasis and renal dysfunction. There are several co morbidities associated with gout namely hypertension, diabetes, chronic kidney disease, hypertriglyceridemia. And CHD. Hyperuricemia is a part of metabolic syndrome. Although as per current recommendation, asymptomatic hyperuricemia need not be treated, weight reduction, dietary modification, exercise and control of co morbid conditions should be contemplated.

Table 1. Drugs causing Hyperuricemia:
- Low-dose ASA
- Thiazide diuretics
- Loop diuretics
- Pyrazinamide
- Ethambutol
- Niacin
- Tacrolimus
- Cyclosporin

Academic Activities of Dr Sarbani Sengupta, ACHD/P/Incharge

Dept of Medicine and Rheumatology service

1. Has been elected as Joint Secretary of Indian Rheumatology Association, WB branch for the year 2015-2017
2. Delivered a lecture on ‘Cutaneous manifestation of systemic vasculitis’ at “CUTICON” organised by Dermatological Society of India
4. Chaired Sessions in Annual Conference of East Zone Association of Physicians of India (API) conference entitled “Management of Febrile Neutropenia”
5. Chaired Sessions in Annual Conference of Association of Physicians of India (API) WB branch conference entitled “Organophosphorus Poisoning ”
6. Chaired a Sessions in Hypertension Society of India conference “Hypertension Sumit” entitled “Aortoarteritis”
7. Presented an interesting case of APLA with Chorea in Movement Disorders forum clinical meeting
8. Chaired a session at a seminar on Dementia, organised by Associations of Physicians of India (API), WB branch entitled “Case studies in Dementia”
9. A poster was presented at IRACON 2014 at PGI, Chandigarh from B R Singh Hospital entitled “Quality of life and clinical response to modified maintenance dosage schedule of infliximab in patients with ankylosing spondylitis” and was appritiated by all.
10. Received the Membership of Royal College of Physicians and Surgeons of Glasgow, UK(MRCPS,Glasgow,UK)
11. Written a chapter on ‘Management of Hyperurecimia’ in a bulletin published by MRCPI, Indian chapter
13. Regularly taking classes for MRCP students

Rheumatology Services at BRSH:
4. Rheumatology clinic weekly caters large number of Rheumatoid arthritis, Systemic sclerosis, Anks spondylitis, Psoriatic arthritis, IBD associated arthritis, Reactive arthritis, JIA, Vasculitis, Gout and Osteoarthritis patients
5. A separate SLE clinic has been started to provide more attention to this dreadful multisystem disease which has yielded very fruitful results
6. Joint injections (diagnostic and therapeutic) are regularly done at the clinic
7. Local long acting steroid injection in Carpal tunnel syndrome is being done with great success.
ORAL CANCER IN INDIA

Dr. Debasish Guha
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B.R. Singh Hospital
Eastern Railway
Sealdah

Oral cancer is a heterogeneous group of Cancer arising from different part of the oral cavity, with different predisposing factors, prevalence, and treatment outcomes. It is 6th most common cancer globally with an annual incidence of over 3 lakh cases, of which 62% arise from developing countries like India. Oral cancer is the 3rd most common Cancer in India, and accounts for 30% -40% of all cancers in India, with a prevalence of 20 per lakh population. The variation in Incidence and pattern of oral cancer is due to regional differences in the prevalence of risk factors. But as oral cancer has well defined risk factors, these may be modified-giving hope for primary prevention.

Need for Screening: Despite the fact that the oral cavity is accessible for visual examination, and that the oral cancers and premalignant lesions have well defined clinical diagnostic features, oral cancers are typically detected in their advanced stages. In India, 60-80% of patients with advanced diseases. Consistent with patients presenting for medical care with more advanced disease in India compared with developed countries, overall survival rate is also reduced. Early detection will not only improve the cure rate, but it would also lower the cost and morbidity associated with the treatment. It is imperative that cost-effective oral cancer screening and awareness initiatives be introduced in high-risk populations such as those found in India.

Signs and Symptoms: Skin lesions, lumps or ulcer that do not resolve in 14 days located:

- On the tongue, lip, or other mouth areas
- Usually small
- Most often, pale coloured on the s, may be dark or discolorred
- Early sign may be a white patch(Leukoplakia) or a red patch(Erythroplakia) on the soft tissues of the mouth
- Usually painless initially
- May develop a burning sensation or pain when the tumour is advanced
- Behind the wisdom teeth
- Even behind the ear

Other symptoms include:

- Problem in moving the tongue
- Swallowing difficulty
- Mouth sores
- Pain and Parasthesia are late symptoms

Causes: Oncogens are activated as a result of mutation of the DNA. Risk factors that predispose
a person to oral cancer have been identified in epidemiological studies. It is important to know that 75% of oral cancers are linked to modifiable behaviours such as tobacco use and excessive alcohol consumption. Other factors include poor oral hygiene, irritation caused by ill-fitting dentures and other rough surfaces of the teeth, poor nutrition, some chronic infections caused by bacteria and viruses.

In many Asian countries, culture of chewing betel, paan and Areca is known to be a strong risk factor for developing oral cancers. Man are twice more affected than women with oral cancers, particularly men older than 40 to 60 years of age.

**Premalignant lesions** : A premalignant (or precancerous) lesion is defined as "a benign, morphologically altered tissue that has a greater than normal risk of malignant transformation."

There are several different types of premalignant lesion that occur in the mouth. Some oral cancers begin as white patches (leukoplakia), red patches (erythroplakia) or mixed red & white patches (erythroleukoplakia or speckled leukoplakia). Oral leukoplakia carries an overall risk of transformation to squamous cell carcinoma from 0-20% which may occur in 1-30 years. Other common premalignant lesions include oral lichen planus (particularly the erosive type), oral submucus fibrosis and actinic cheilitis. Oral submucus fibrosis occurs almost exclusively in Indians and in Indian communities living abroad. The is a progressive lesion characterised by limited opening of the mouth leading to trismus, and burning sensation on eating spicy food.

**Impact of Smokeless Tobacco** : Tobacco and alcohol are known risk factors for Oral cancers. In India 57% of all men and 11% of all women between 15-49 years of age use some forms of tobacco. Besides smoking, smokeless tobacco is widely prevalent. Use of Paan- consisting of pieces of areca nut (supari), processed or unprocessed tobacco (zarda), aqueous calcium hydroxide (slaked lime or chuna) and some spices wrapped in the leaf of piper betel vine leaf (paan pata)- is very common and socially & culturally acceptable. Additionally zarda, khaini, gutka, etc. are all dry mixtures of lime, areca nut flakes and powdered tobacco custom mixed by vendors. In recent years, commercially available sachets of premixed areca nut, lime, catechu, condiments with or without powdered tobacco have become popular, particularly among younger Indians. Typically paan and gutka is kept in the cheek and chewed or sucked for 10-15 minutes, with some users keeping it in overnight. Acquisition of the tobacco habit typically occurs early in life through imitation of a family member or peers. Gutka is popular among women, as smoking by women is still frowned upon in India. Gutka is also cheap compared to cigarette- costs around Rs.1/- only for a sachet- thus making this chewable form of tobacco so popular. Studies indicate that at least one third of school students less than 15 years have used one form or another of tobacco. Recently a trend has been observed that there is an increase in incidence of oral cancer in young adults in India.

**Public Health Importance** : Oral Cancer is of significant Public Health importance to India. Firstly, it is diagnosed at later stages which result in low treatment outcomes and considerable costs to the patients whom typically cannot afford this type of treatment. Secondly, rural areas in middle & low income countries also have inadequate access to trained providers and limited health
services. As a result, delay has also been largely associated with advanced stages of oral cancer. Earlier detection of oral cancer offers the best chance for long term survival and has the potential to improve treatment outcome and makes health care affordable. Thirdly, oral cancer affects those from lower socio economic groups, due to higher exposure to the risk factors such as use of tobacco. Lastly, even though clinical diagnosis occurs via examination of the accessible oral cavity and tongue, the majority of cases present to a healthcare facility at later stages of cancer subtypes, thereby reducing chances of survival due to delay in diagnosis. Public health officials, private hospitals, and academic medical centres within India have recognized oral cancer as a grave problem. Efforts towards early detection and prevention is therefore so important. An analysis of oral cancer incidence in India has revealed the benefit of Public awareness Programmes, Public health interventions, demonstrating a significant parallel reduction in oral cancer incidence. Compared to the US, reduction is more dramatic in India, where there is much higher prevalence of oral cancer.

Some of the states in India, like Madhya Pradesh has banned Gutka. Supreme Court has declared Gutka habit as a menace to public health, and as gutka selling could not be banned without Government support, Supreme Court has banned plastic as a packing material for gutka sachets. Paper packaging makes transport of large quantities of gutka more troublesome. There are also troubling news that some gutka contains waste from perfumeries and tanneries as flavouring, making it more noxious. The Government lacks the labs needed to ascertain adulteration of this kind, and there is huge pressure from the ever powerful Industrial lobby with vested interest. Widespread & continuous publicity in Mass media, as is seen now a days in National Television Channels, regarding the self & family ruining ill-effects of Tobacco uses is needed to prevent Oral cancer in India. Government of India is now planning to ban sale of loose cigarettes with an aim of restricting the sale of cigarettes.

Personal Achievements of Dr. Debasish Guha in the year 2013-2014:
1. Received MR Award in October 2014 in Bangaluru, India, from Hon’ble Minister of Railways.
3. Elected as Vice President of AOI, West Bengal State Branch in December, 2014.
4. Reviewer of IJD, Indexed Journal of IDAVL
5. Joint Secretary of Association of Otolaryngologists of India, West Bengal from 2012-2014
6. Conference & Workshop Coordinator of 43rd State Conference of Association of Otolaryngologists of India, West Bengal Branch, held in December, 2014 at Peerless Hospital & Hotel Taj Gateway, Kolkata
7. Reviewer of BJOHNS-State Journal of AOI, W.B.
8. Completed Certificate Program of John Hopkins University-Academy of Continuous Education
USE OF SPUTUM QUANTITATIVE ASSAY IN MANAGEMENT OF AIRWAY DISEASES

Dr. Angira Dasgupta
DMO/P/BRSH, MD,DNB,MRCP(UK), FCCP(USA)

Airway mucosal inflammation is fundamental to the etiology and persistence of airway diseases such as asthma, COPD and bronchiectasis. It contributes to symptoms, variable airflow limitation and airway hyper-responsiveness and even the structural changes (ie, remodelling) associated with asthma. The presence and type of airway inflammation can be difficult to speculate clinically thereby delaying the introduction of appropriate treatment. However, until recently, its measurement was not considered by national and international guidelines that recommended treatment based only on symptoms and measurement of airflow limitations.

Sputum cell counts are a relatively noninvasive and reliable method of identifying airway inflammation. The method of sputum collection has been well described and standardized. Spontaneously expectorated sputum, when available, provides information equally as useful as induced sputum. Hypertonic saline could also be used to induce sputum in patients who are unable to expectorate spontaneously. The method is successful in almost all patients with smoker’s bronchitis and COPD, in 80% of patients with asthma and in 60% of patients with a dry, chronic cough.

Sputum processing and the quantification of cell counts are standardized with well established normal values. The cell counts can accurately discriminate eosinophilic airway inflammation from noneosinophilic airway inflammation. Eosinophilic airway inflammation is steroid responsive while noneosinophilic (usually neutrophilic) inflammation generally is not. Monitoring of airway inflammation using sputum cell counts helps to identify impending loss of asthma control and adjust anti-inflammatory medications in patients with a variety of airway diseases such as asthma, smoker’s bronchitis and chronic cough. It helps to increase corticosteroid dosing in exacerbations associated with an eosinophilic bronchitis, limit the use of corticosteroids in exacerbations associated with a noneosinophilic bronchitis and use antibiotics in exacerbations associated with a neutrophilic bronchitis. Thus, most importantly, it prevents patients from getting exposed to unnecessary steroid courses which are not free from side effects. Additionally, it helps to identify patients with an ‘eosinophil phenotype’ for targeted therapy with anti-eosinophil strategies such as anti-interleukin 5 molecules in severe refractory asthma.

The major limitation of sputum cell counts, despite its elaborate validation methods, is the need for a laboratory and trained personnel. The Department of Pulmonary Medicine of BR Singh hospital will be the first in the country to offer this test soon. This is likely to bring about better control of airway diseases in the population catered by the hospital and lower hospitalisation and expenditure rates by significant proportions.

PUBLICATIONS AND ACADEMIC ACHIEVEMENTS OF Dr ANGIRA DASGUPTA FOR DEPARTMENT OF MEDICINE & PULMONARY MEDICINE

1) Spirometry Reference equations for eastern India, accepted for publication in Lung India
2) Contributed to DAAB : A manually curated database of Allergy and Asthma Biomarkers-in collaboration with Bose Institute, Department of Plant Biology
3) Selected as Reviewer in BMJ Case reports and International Journal of tuberculosis and lung diseases
4) Invited lecture in National Conference of Pulmonary Medicine (NAPCON) 2014 on ‘Tailoring Pulmonary Rehabilitation in COPD.’
5) Faculty in American Thoracic Society research methodology hands-on intensive workshop MECOR (Methods in epidemiology, clinical and operational research.
6) Invited lecture on ‘Biomarkers in Asthma’ and ‘Measurement of airway inflammation’ in American College of Chest Physician (ACCP) update (East India chapter)
7) Completed a distance learning Certificate Course on ‘Medicine and Law’.
In our day to day practise in orthopaedic surgeries we come across patients of which 70 per cent are of geriatric age group associated with co-morbidities. To reduce the chances of post operative complications and decrease hospital stay, we have for last 5 yrs shifted our old line of anesthesia. i.e. GENERAL ANESTHESIA to REGIONAL ANESTHESIA WITH OR WITHOUT SEDATION. This also have helped us to manage post operative pain in this geriatric patients with ease.

For upper extremity surgery we have successfully developed BRACHIAL PLEXUS BLOCK, AXILLARY BLOCK, MID-ARM BLOCK, ELBOW BLOCK, WRIST BLOCK and DIGITAL BLOCK. These are mainly done with nerve locator (braun) with Stimulplex needle. So the accuracy of the block is perfect. For SHOULDER ARTHROSCOPY or surgeries involving the shoulder joint, SUPRASCAPULAR NERVE BLOCK is a must.

For lower extremity surgeries as usual spinal and epidural is a common choice. BUT in very old, poor G.C patients with associated HTN, DM, IHD etc we now have changed our mode and is going for SPINAL ANESTHESIA via SACRAL FORAMINA S1-S2. Recently we have PUBLISHED an excerpt as BRIEF COMMUNICATION in INDIAN JOURNAL OF ANAESTHESIA/2014/VOL.58/ISSUE1/PAGE 80-82.

We have continued our research in this field for more and more safer modes of anesthesia with adequate post operative pain relief and has come across EPIDURAL ANESTHESIA VIA SACRAL FORAMINA S3-S4 SPACE using stimuplex needle. Drug used is 0.5% ropivacaine 20ml mixed with 10ml of distilled water. PAPERS PUBLISHED in this topic are SACRAL EPIDURAL ANESTHESIA in IOSR JOURNAL OF DENTAL AND MEDICAL SCIENCES. VOL 13, ISSUE 5, MAY 2014.

Other types of anesthesia include FEMORAL NERVE BLOCK with spinal, PSOAS COMPARTMENTAL BLOCK, POPLITEAL NERVE BLOCK, SCIATIC NERVE BLOCK, ANKLE BLOCK etc. We also use adjuvant like CLONIDINE, FENTANYL to the block to increase its duration.

Other published paper are ROLE OF PREOPERATIVE FASCIA ILIACA COMPARTMENTAL BLOCK ON THE SIDE OF FEMUR SURGERY in IOSR JOURNAL OF DENTAL AND MEDICAL SCIENCES. VOL3. ISSUE6 JUNE 2014.
A Short Review of Maintenance of Cleanliness of Neighborhood, Workplace & Railways to progress towards a Swachh Bharat

Dr. Samarjit Bhattacharyya
Sr. DMO/Asansol/E. Rly
Dr. Partha Sarathi Mitra
Sr. DMO/Asansol/E. Rly

All of us would agree to the fact that lack of Hygiene, Sanitation and Civic Sense is one of the critical challenges India and its citizens face today. Some measures are reviewed below:

A) Hygiene, Sanitation and Civic Sense

Following are the possible measures for optimum upkeep of Hygiene, Sanitation and Civic Sense:

1. There needs to be civic education combined with appropriate strict penalties against violations.
2. Locals, shop owners, NGOs and business houses must be roped in to provide modern sanitation facilities and its upkeep
3. Police must be trained on civic sense. Presently police itself violates civic issues and sets a bad example for others
4. Enable & enforce cleanliness in religious places with bill boards, videos etc. and gentle persuasion initially for few months until our countrymen internalize the message
5. People should be educated about hygiene, sanitation and civic sense through mass media campaigns
6. Awards, in form of development funds should be allocated to cities & localities who keep their city and area clean
7. End corruption in Local bodies and Municipality and everywhere else
8. Schools must teach civic sense as compulsory subject
9. Educational & Motivational videos for schools & colleges
10. Proper and prior planning of drainage and parks in towns and cities, before approval of projects
11. Local government officials (civil body) should be allocated areas for which they are responsible for clean keeping
12. Private agencies should be involved for imposing fines on people who litter, spit and dirty public places
13. Repeat offenders should be given harsh punishment
14. Leaves, Plastics, and other garbage items should not be burnt in open
15. Proper disposal of organic waste through composting, preferably within the building premises such as schools, colleges, societies, parks & gardens, hotels, industries etc. Use the compost for greening the premises and landscaping. Surplus compost should be sent to rural areas for promoting organic farming.
16. More dustbins should be installed in public places
17. Municipal Solid Waste Management Rules & Guidelines should be implemented
18. Mandatory Primary Waste Treatment Site in every residential society, say with more than 250 households
19. Mandatory Sewage Treatment Plant in every residential and commercial complex
20. State Government, State Pollution Control Board, Central Pollution Control Board must enforce setting up de-centralized solid-waste management, composting & recycling centers in societies, commercial establishments, ward level etc.
21. Clean & hygienic toilets should be built in schools.
22. Waste segregation bins should be provided in Schools, colleges, Public Places, etc.
23. Segregation should not be only into Dry & Wet Waste but also Reject Waste - certain waste items such as sanitary pads, diapers, band-aid, etc. cannot be classified as dry or wet
24. Chewing tobacco and smoking should be banned
25. More number of cleaner toilets should be made in public areas and these should be properly maintained with sufficient use of soap, phenyl & other cleaning compounds. Inspections should be carried out & feedbacks from the users regarding its hygienic maintenance should be taken.
26. Population control will also help in improving the situation
27. Supply of sufficient water & phenyl at toilets should be ensured in schools. Persons for hygienic maintenance of toilets must be kept by school administration on regular basis.
28. School children should be encouraged to use toilets at school. They should also be motivated to participate in programs like voluntary toilet cleaning at their own school in association with teachers.

B) Possible Measures for Maintenance of a CLEAN NEIGHBORHOOD
1. Neighbors should get together and lay out their ‘Neighborhood Cleanliness Objectives’
2. A cleanliness committee should be formed to make this a sustainable initiative
3. Cleanliness Do’s and Don’ts should be established and posted in multiple locations in Bi Lingular lucid language so that residents, staff, vendors, visitors can all understand (to also include guidelines on cleaning the pet waste, prohibition on littering, posters, spitting, etc.)
4. Residents should orient their families, as well as staff and vendors coming in the neighborhood
5. Cleanliness sign boards to include phone numbers of local health officer, waste pick up agency, Resident Welfare Association, MLA with a call to action from residents
6. Collective pledge should be taken to commit certain hours a month on cleanliness
7. Multiple teams should be formed with each covering 4 cleanliness days every month
8. Cleanliness drive should be organized to pick up trash in the neighborhood (or adjoining areas), cleaning the parks, etc.
9. Collective residents action mechanism should be devised on reporting unauthorized hawkers in the neighborhood
11. Adequate garbage collection bins should be kept in the society & neighborhood from where regular garbage disposal should be ensured.

12. Initiate a neighborhood beautification drive with Residents

C) Possible Measures for Maintenance of a CLEAN WORKPLACE

1. Introduce awards, monetary benefits for clean work place
2. Beautify the area where people throw the garbage, this will refrain people from throwing garbage at that place again
3. Install different bins to segregated waste properly
4. Put waste bins wherever feasible with USE ME marked prominently
5. Dust-bins should be imaginatively and attractively designed, in bright colors, with catchy inscription on them
6. Ban smoking and chewing of pan & gutkha in all offices
7. Every employee should be made responsible for keeping his/her desk clean
8. A suitable system of fines and penalties should be devised
9. Trade Union Leaders at all levels must make it a point to speak about it, and set personal examples at all possible occasions
10. Lead others by example by personally picking from the floor & throwing them into dust bin
11. Special task force should be made which will monitor and educate people in the office premises & industrial areas
12. Each individual should be made responsible for at least one room in the office
13. Authorize & Empower the Administration to impose fine on staff that litters the office space
14. Every workplace should have their personal waste disposal mechanism in place
15. Reach work place 10 minutes ahead of time to clean up our own work place
16. Hand dryers should be used instead of tissue papers in office washrooms
17. A common lunch place should be allotted where all, irrespective of cadres should take lunch and eatables and throw away the wastes in one place
18. An ‘Office, Shed & Plant Cleanliness Manual’ should be created and discussed during induction of every new employee
19. Waste printed paper sheets should be used as rough papers for notes on the back side
20. A poster campaign should be done in office, sheds & plants telling people about the pros and cons of keeping their workplace clean
21. Garbage vats from where regular disposal is ensured should be available near all workplace & colonies and all garbage generated by cleaning of the workplace should be neatly disposed to that vat/vats.

D) Possible Measures for Maintenance of CLEANLINESS IN RAILWAYS

1. There should be a fine on littering/spitting on stations and inside the train
2. Install more garbage bins on the railway stations and inside the trains
3. The cleaning staff needs to be made accountable for their work
4. One cleaning staff can travel the entire length of train with open dustbin in trolley at intervals, so that each passenger can just drop the waste without having to accumulate in the coach
5. Cleaning of stations and trains can be fully outsourced to private industry with service level contracts
6. Out-sourced agencies should be made more responsible & require strict inspection by railway authorities
7. People should be sensitized about their fellow passengers
8. Only valid ticket holders to be allowed inside the railway station
9. Awareness campaigns should be organized
10. Instead of Bio toilets, aircraft like toilets can be installed
11. Toilets inside the trains should be cleaned after regular intervals
12. People should be fined heavily for ticketing violations
13. Effective use should be made of CCTV cameras
14. Sign boards should be put up at different places with the violation and fines printed on them
15. The attendants and catering staff should be trained to create awareness among the passengers
16. Beggars and unauthorized vendors should not be allowed inside the station premises
17. Passenger policy & rights should be posted inside the train
18. Regular crackdowns should be made on people without tickets or platform tickets
19. Elaborate media publicity in TV & Radio should be done to spread awareness
20. Use of toilets to be restricted while trains halt in railway stations. Some measures should be available so that toilet doors do not open when the train is standing at a station.
21. Sewage collection & better disposal methods should be found
22. Display videos at stations - on civic sense preferably acted by famous personalities like Amitabh Bachchan
23. Provision of cow catchers/similar measures at all entry points of railway stations (particularly in roadside stations)
24. To prevent use of pan masala/pan/gutkha and subsequent spitting in platforms, selling of these articles in & around station premises is to be stopped. RPF alone being inadequate in this respect, help from NGO, school children & other departments are required.
25. Selling of food articles by unauthorized vendors should be strictly prohibited; banana skins, left over idly or eggshells give very ugly looks. Rodent & cockroach menace is also a direct result.
26. A cleaning team with sufficient manpower along with required mechanized cleaning machines & skilled people to run them is a must. Now-a-days very high sanitation standards is expected, occasional cleaning drives by volunteers are not substitutes for an expert cleaning team.
Public Health Challenges
to Indian Railways

Biswajit Chowdhury
AHEO/HQ/KKK/E.RLY

It is no exaggeration to say that the Indian Railways is the lifeline of India. There is no area, where Indian Railways has not influenced in terms of the social, economic, cultural and political aspects of Indians. It is remarkable that Indian Railways (IR) has come a long way since it started its maiden journey on 16th April 1853 from Bombay to Thane with only 400 guest passengers! Today about 14,300 trains cover a distance of 64,460 route kilometre distance. It provides services to 2.2 crore passengers and operates 11,842 passenger trains daily.

Quite naturally, Indian Railways matters to almost every Indian. The IR has access even to some of the remotest corners of India. Therefore, Indian Railways is well equipped to play a significant role in meeting the Public Health Challenges. Because of its vast geographical sweep and mobility it plays many meaningful roles, the scope of which can be greatly increased. First, it is equipped to carry “State-of-Art” medical facilities, doctors and paramedics, operational units etc. to the remotest corners of the country, particularly those areas where people do not have an easy access to basic/emergency medical services.

Let us be clear in this context that Indian Railways caters to two sets of population grossly. The first set of population belongs to the larger Railway family (IRMS is providing services to over 65 lakh beneficiaries) and the second set of population belongs to millions of commuters by serving whom Indian Railways takes great pride.

It will be worthwhile to know what exactly Public Health means to common men and what are the challenges of Public Health with reference to Indian Railways. According to the definition provided by an entry in Wikipedia: “Public Health is science and art of preventing disease, prolonging life & promoting health through the organized efforts and informed choices of society, organization, public & private, communities and individuals.”

First and foremost Public Health Challenge for the Indian Railways is to sustain existing sanitation/cleanliness mechanisms which are already in place before a nation-wide “Swachh Bharat Abhiyan” has been made operational from 2nd October this year. At a time, when open defecation has been identified as a major public health challenge, it is quite interesting that the first mobile toilet was introduced in the 1st Class compartment of Indian Railways way back in 1891 and later in lower class compartments from 1907. Currently a process is underway to introduce ‘Environment Friendly Green Toilets’ too. Since 1993, IR has been experimenting with it. Spreading of vector-borne diseases in Railway colonies/establishments and peripheral areas is also responsible due to inadequate cleanliness/sanitation/drainage system. More importance must be given to clean the rakes, compartments of all the trains and not only special status trains.

It has to be kept in mind that cleanliness/sanitation in Indian Railways is a multi-disciplinary responsibility that vests with various departments namely Medical, Engineering, Commercial and Mechanical. Often it is seen that for lack of a proper monitoring system under one umbrella, there is confusion about responsibilities to which department should do what work. In this context, a separate co-ordinating agency like Public Health Engineering Department can be envisaged.
Though provision of **Safe Drinking Water** is the responsibility of Engineering Department, Medical Department has an important role- to maintain the quality of drinking water. Most passengers/commuters still rely on water supplied by Railway Authority at Station and Station premises. It is also one of the major Public Health Challenges which Railways has to still face. People residing at the Railway Colonies/Settlements are often seen to be sceptic about the quality of the water.

Prevention & Food Adulteration Act 1954 has been repelled and **Food Safety and Standard Act, 2006** has been implemented all over Indian Railways with effect from 5/08/2011. Food is one component in which public health is directly involved. The Government of India after long deliberations has realised it and already it is being well monitored taking State, Railway and other authorities on board together. Along with Safe Drinking water, the quality of food staff supplied at Railway Stations/Premises must be as per standard guidelines. It is a fact that regular inspection of kitchen and food stalls, mandatory health check-up of food handlers is being done. Quality of food stuff either made available by Railway Agencies or vendors appointed/approved by agencies could have serious health implications if they are found to be adulterated, stale, uncovered or poorly preserved. Besides that quite a number of cases have been reported and health advisories have been circulated by Railway regarding foodstuff/water purposely mixed up with harmful toxins that can have deleterious effects on unwary passengers.

Let us now prioritise some general public health challenges, some of which might also be specific to the Indian Railways.

Indian Railways being the most widely used mode of Public transport, it must also revaluate whether existing mechanism to control contagious diseases/infectious diseases (like Ebola etc.) is sufficient or not from the standpoint of Public Health. Indian Railways has a total of 47,336 hectares vacant land and 942 hectare under encroachment. As various types of rodent, mosquito-linked diseases can spread from this unused/occupied stretch often filled with thick shrubs, bushes and weeds, regular cleaning has to be undertaken with greater stridency. Though Indian Railways has taken a commanding role in the implementation of pulse-polio programme, it has to assume a more pro-active role in the HIV/AIDS surveillance and Revised National Tuberculosis Control Programme (RNTCP). There must be no room for any slackness in ensuring cent per cent implementation of Universal Immunisation Programme (UIP), mainly at wayside stations. Another little-known aspect of Public Health Challenge is the habit of unrestricted alcoholism indulged specially in paydays or the days afterwards by a section of Railway employees mostly in the wayside Railway colony premises that might seriously impair the work ethos.

Indian Railways is rightly committed to a variety of health promotional activities through different modes of IEC (Information, Education & Communication) by organising health screening camps, health awareness camps, Multi-Purpose Health Drives (MPHD) etc. for the sake of Railway employees, the larger Railway families including the retired employees. It is already a forward step to the cause of the Public Health. But, in the area of family welfare programmes, a way has to be found out why the number of male ligation (vasectomy/NSV) is not up to the mark among the Railway employees.

In India there is a real dearth of doctors specialising in community medicine, which is itself a challenge to the medical fraternity for addressing various public health challenges in the country. The same applies to the Indian Railways. It is about time an overhaul in our approach can be thought through to see if the existing mechanisms to address public health challenges are enough or whether the problems lie in their execution.
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A WELL WISHER
An Indian population based study determined the crude ESRD incidence rates at 151 per million populations. It is estimated that there are about 55000 patients on dialysis in India and the dialysis population is growing at the rate of 10 -20% annually.

Diabetic Nephropathy is the commonest cause of ESRD followed by CKD of undetermined etiologic and Chronic Glomerulonephritis. Obstructive Uropathy is common in certain region of India known as “Stone Belts”. Mean age of patients requiring Renal Replacement Therapy (RRT) in India is lower compared with developed countries. Renal failure is usually far advanced at the time of presentation reflecting lack of proper screening. The role of genetic and environmental factors has not been explored.

Insufficient number of major hospitals result in overcrowding and long wait times for dialysis. Lack of trained man power hampers health care delivery. India has only 850 qualified Nephrologists for a country of 1.2 billion people and 90% of them work in private sector. There are about 5500 dialysis centres in India. Overall cost of RRT is less than in developed countries, but still out of reach of most people. The monthly cost of common dialysis prescriptions - 2 HD sessions / week and 3 PD exchanges /day was estimated at Rs.29,852/- & Rs.28,763/- respectively. Patients often cut down on dialysis frequency for economic reasons. Frequent and often long term hospitalisation adds to financial burden.

All forms of RRT are available in India, but the penetration is limited to urban areas. HD is the preferred mode of RRT- less than 20% of all long term dialysis patients are on PD. PD is seldom offered as the first choice of RRT. Though cost and infection issues are unfounded but still patients with multiple co-morbidities who cannot be put on HD, are put on PD.

Renal Transplantation is the most viable long term option for ESRD patients; however transplantation actively falls greatly short of demand. Lack of organised cadaveric transplant programme is a major stumbling block. Deceased donors are poorly utilized because of infective organ procurement network and poor public health education. High cost of immune suppressive medications is a major problem often resulting in non adherence of scheduled medications.

Demands for RRT are increasing constantly. The government has included care for Kidney disease in its 12th 5 year plan. Integral to providing “Holistic CKD Care” is the need to develop strategies. That will reduce the burden of progressive kidney disease. ‘Preventive Nephrology’ is the need of the hour that will emphasize on early detection of kidney disease and institute measures to slow down its progression.
VITAMIN D DEFICIENCY

Dr. Indira Jha
ACHD/P/ITU/BRSH

Vitamin D is rightly called the sunshine vitamin because sun is the richest source of Vitamin D. The UV Beta rays of the sun (of wavelength 295-315 nm) is available between 11 am to 3 pm. This is the best time of sun exposure for production of Vit D3 by the skin. At least 45 min of sun exposure is necessary. 7 Dehydrocholesterol (in skin) ----> 25 OH vit. D3 (liver) ----> 125 OH vitD3 (kidney) 25 OH vit D3 is the major circulatory form of Vit D. 125 OH Vit D acts like a hormone. It is the active form of the vitamin. Requirement of Vit D is 2000 IU/day.

Diet is a poor source of Vit D unless it is fortified. Cheese and milk are poor sources of Vit D. Egg yolk contains 20 IU of the Vitamin D. We need 2000 IU/day. So Vit D in egg is insufficient to meet our requirements. Some fatty fishes like salmon, cod, shark are good sources but not readily available in India. In USA cereals, milk and oil are fortified. In India states of Rajasthan, Gujrat and Maharashtra have started fortifying cooking oil. Vitamin D 2 is available from diet. There is no difference in conversion of Vit D2 or Vit D3 in the liver and kidney.

Lack of sun exposure, wearing traditional clothes; use of sunscreen, cloud cover, environmental pollution, time of the day for skin exposure, winter season, higher latitudes all affect synthesis of vit D. 125 OH Vit D helps in calcium absorption from the gut. This is the calcimimetic effect of Vit D. When 25OHvit D3 is < 30 ng/ml, calcium absorption is decreased from the gut. This leads to low level of calcium in the blood. Parathormone level is increased. This increases bone resorption to maintain normal blood calcium level. This causes bone loss. Bone loss when chronic causes bone pain, fractures and osteomalacia.

Apart from the PTH ----> kidney ----> bone axis Vit D also has non calcimimetic effect due to the presence of Vit D receptors in muscles, heart, pancreas, breast, prostate and colon. 25 OH Vit D is converted into 125 OH Vit D in these cells too. This accounts for the role of Vit D beyond bone. Vit D leads to increased risk of infections (tuberculosis, pneumonia, asthma), metabolic disease (diabetes), cardiovascular disease, (HTN) autoimmune diseases (RA, type1 DM, crohns disease,) cancers of the breast, colon and prostate. Vit D inhibits tumour angiogenesis, stimulates mutual adherence of cells and increases intracellular communication through gap junctions and so inhibits cell proliferation. It also enhances pulsatile release of calcium from cells which causes terminal differentiation and apoptosis.

Factors that are responsible for Vit D deficiency are less skin production, less vit D fortification in diet, less absorption from gut. This may be due to fat malabsorption, hepatic or renal failure, and some commonly used medications like anticonvulsants (barbiturates, phenytoin), glucocorticoids, ketoconazole antitubercular drugs (rifampicin), anti retrovirals. Drugs increase metabolism of Vit D. In Nephrotic Syndrome there is loss of Vit D binding protein in urine. Target organ resistance due to Vit D receptor mutation may also be responsible for the deficiency.
Treatment of Vitamin D deficiency requires Vit D 60000 IU/week for 8 weeks and then 2000 IU/d or 60,000 IU/month. At the beginning of therapy Vit D and calcium level should be monitored and for follow up at least calcium level should be monitored regularly to avoid hypercalcaemia.

Vit D Toxicity or hypervitaminosis D may be due to overzealous treatment with Vit D without proper monitoring. Level of Vitamin D should be kept below 100ng/ml. A dose of Vit D more than 6 lacs IU/d causes overdose. Upto 10,000 IU/d is considered safe. A normal individual requires 2000IU/d Patients with hypervitaminosis present with anorexia, nausea, vomiting, fatigue, constipation, muscle weakness, irritability, drowsiness and coma. Their calcium level is high and it causes hypertension, calcification of bone, heart kidney and soft tissue. Treatment is low calcium diet, hydration and short course of steroid. Vit D level returns to normal in one month.

To conclude Vit D deficiency is a very common global problem and more so in our country. Vit D supplementation should be given with proper monitoring.

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**Performance of Gastroenterology Department/BRSH for 2014**

Dr. Goutam Roy
Sr. DMO/P/Gastroenterology/BRSH

[1] No. of Upper G.I Endoscopy : 942

[2] No. of colonoscopy : 100

[3] No. of ERCP with CBD stone removal and stenting : 14


[5] No. of endoscopic biopsies : 43

[6] No. of stricture dilatation : 5

[7] No. of patients seen in Gastroenterology OPD : 1245

[8] No. of patients seen in Ward : 573

[9] Papers published in indexed journals : 2

    (a) Trends of chronic liver disease in a tertiary care referral hospital in Eastern India in Indian J Public Health 2014 ; July-September issue.

    (b) Comparison of Manning, Rome I, II, and III, and Asian diagnostic criteria: report of the Multicentric Indian Irritable Bowel Syndrome (MIIBS) study. [Coauthor]

[10] Conferences attended ISGCON 2014 at Mumbai and presented a paper entitled “FACTORS AFFECTING THE OUTCOME OF PEGINTERFERON AND RIBAVIRIN TREATMENT OF CHRONIC HEPATITIS C --- A REPORT FROM EASTERN INDIA [which is going to be published in the journal “TROPICAL DOCTOR” in 2015]
With the anticipation of being hosts to the 15th Indian Railway Public Health Conference at Kolkata by the Eastern Railway, the use of computers and softwares along with net-surfing and e-information have made its debut in a big way in the various Offices of MDs and CMSs. The Office Supdt. are having a tough time to keep pace with the various Public Health Programmes that Railways Hospitals have adopted. Often on-line support and help is sought for.

An Office Supdt. writes to the IT Technical Health Support System:

Dear Tech Health Support,

Last year I got upgraded from Health Unit 5.0 to Hospital 1.0 and I noticed a distinct crowding in the overall system performance, particularly in the OPD 925 and MedicineLP.7 applications, which operated flawlessly under Health unit 5.0. In addition, Hospital1.0 installed two exhaustive programmes, Public Health Meeting 4.0 and Health Check-up.365.12. And then it installed undesirable programmes such as Audit 5.0 instead of Audio Player3.1, Health Camps3.0 instead of Camp Fire 6.0 and Morning Attendance10.0. instead of Afternoon Nap 2.0, and lastly KPI.23.0 instead of Solitaire1.0.

What can I do?

Reply:

Dear Mr. OS, Railway,

First, keep in mind, Health Unit 5.0 is an Relaxation Package, while Hospital 1.0 has an active Public Health Operating System.1.1. With National Health Programmes that are to be followed by all the Railway Zones, you are the link between Doctors.IRMS.0 and Health Inspectors. 24.7 and your object should be to reach your set Target.2015 by the Age. 58.0 or 60.0 as applicable.

Please enter command: ithoughtyoucaredforyourstaff.html and try to download Mosquito Spray 6.2. Then it will automatically run the applications Repel 2.0 and Vacant 3.5 which will give you longer peaceful Solitaraire.spells and empty space in your Office 2015. However, remember, overuse of the above application can cause Public health Programme Officer 1.0 to default to Organophosphorus Poisoning 2.5 or Chargesheet SF.5.

Also DO NOT disturb the original package of Hospital.Kolkata. 1.0.... Otherwise new home page in the form of Hospital.Jamalpur will automatically download into your system. So be careful. In addition, please do not attempt to reinstall the Health Unit 5.0 program. These are now unsupported applications and will crash IRMM.2000.

We recommend : Anti. Tuberculosis 3.0, Sanitation.2.0, Drinking Water. 24h, Health Check-up.exe, Vaccine.02100, Blood Donation 13.5, St. John Ambulance.12.0 and other similar programmes.

Good Luck?

In order to take that one giant step forward, not relying on the e-world and their Office Supdts., the Railway administration decided to add a new Public wing to their Hospital1.0 after taking opinion from their own IRMS Medical Officers.
ACHD (Dermatology) voted to scratch it and the Consultant Dermatologist advised no rash moves. The Sr. DMO (Gastroenterology) had a gut feeling about it, but ACHD (Neurology) thought the administration had a lot of nerve and the ACHDs (Obs&Gyne) stated they were all labouring under misconception. The ACHD (Ophthalmology) considered the idea short-sighted; the ACHD (Pathology) yelled, "Over my dead body" while the Chief Pediatrician said, "Grow up!" The DMO (Psychiatry) thought the whole idea was madness. The ACHDs (Surgery) decided to wash their hands of the whole thing and the two ACHD (Radiology) could see right through it! The ACHD Physicians thought it was a bitter pill to swallow; and the Consultant Plastic Surgeons said, "This puts a whole new face on the matter. The ACHD (Orthopedics) thought it was a step forward, but the ACHD (Urology) felt the scheme wouldn't hold water. The four ACHD s (Anaesthesia) thought the whole idea was a gas and the Chief Cardiologist didn't have the heart to say no.

In the end, the matter was left in a File and marked "Pending “to be uploaded in the Google Drive. Not being demoralized by their own Doctors, the Railway administration decided to take help from unbiased non-Railway and private Doctors for their Public Health Project. In an unfortunate accident where a light Engine went over a cow that had strayed onto the tracks with potentiality to cause Public Health menace.com to neighbouring Railway colony, five Doctors were called following doubts raised by the local Police as to the correct identity of the animal, and whether it could have been a human being. ARME was called and transported the doctors to the spot: a General Practitioner, a Physician, a Radiologist, a Surgeon, & a Pathologist.

On reaching the spot, the G.P said "I think it’s a cow, but needs a second opinion...so let the Physician see..." The Physician also inspected the carcass and said..."It’s a cow...but the other possibilities should be considered such as a hypertrophied goat or an atrophied hippopotamus..." Radiologist quickly scanned the situation and mumbled...”.. It can be a cow, a goat or a hippopotamus or even a man with sebaceous horns...however, Please correlate clinically." The surgeon was the only one who touched the carcass, took a biopsy and then he turned to the pathologist & said, “Go and confirm whether that’s a cow. “The pathologist slowly carefully approached the carcass, looked at the biopsy sample and said...”Specimen inadequate...”

So in the end, with Public Health gaining a lot of importance but with very little output, many IRMS Doctors decided to enroll themselves with the IPHA (Indian Public Health Association), perhaps to visit a local pub.
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