EVALUATION OF COMPUTER USAGE IN HEALTHCARE DELIVERY AMONG PRIVATE PRACTITIONERS OF NCT DELHI

ORAL PRESENTATION
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Indian health system - increasing cost and demand pressures and a shortage of skilled health care workers till the root

Poor integration of information - between the health sectors - incapable to handle public health issues & lack of proper evidence in public health decisions

70% of the population use - private sector - not integrated with the govt. system & often not regulated.

Ehealth strategy – proven solution; remains incompetent in pvt. sector – never documented or little initiatives to assess the utilization of ICT by the private health care delivery systems in India.
AIMS AND OBJECTIVES

1. To evaluate the usage and the knowledge of computers and Information and Communication Technology (ICT) in health care delivery by private practitioners.

2. To understand the determinants of computer usage by the private practitioners.
METHODOLOGY

• Cross-sectional study – Nov’ 07 – Dec ’08 – 3 districts of Delhi state – 600 clinic based private practitioners.

• Inclusion criteria: only modern medicine practitioners; practicing for 1 year in same location

QUESTIONNAIRE

USAGE

Software
Hardware
Internet

KNOWLEDGE

200 doctors
600 doctors
IMA register

10 dt.
3 dt.

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**BACKGROUND**

**AIMS**

**METHODOLOGY**

**RESULTS**

**CONCLUSION**

**SCOPE**

**KNOWLEDGE**

- SOFTWARE – 60%
- HARDWARE – 10%
- INTERNET – 30%

**MEDIAN COMPOSITE SCORE**

**POTENTIAL BARRIERS**

- Logistic: 7 & 28
- Financial: 3 & 12
- Technical: 3 & 12
- Patient related: 2 & 8

**MIE 2011, Ganeshkumar**
**RESULTS**

- **85.5%** - males and the mean age of all - **45.46±5.52 years**
- **77%** - own computer - but only **10.5%(63)** – using in clinic
- **22%** - had known about EHR – but only **8.8%** - using in clinic
- Male and super speciality practitioners - more knowledgeable

<table>
<thead>
<tr>
<th>PRACTICE SPECIALTY</th>
<th>PRESENCE OF EHR IN THE CLINIC N(%)</th>
<th>COMPUTER KNOWLEDGE SCORE (MEAN ± SD)</th>
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</thead>
<tbody>
<tr>
<td>General practice</td>
<td>20(5.7)</td>
<td>2.26±1.05</td>
</tr>
<tr>
<td>General surgery</td>
<td>1(3.6)</td>
<td>2.48±1.04</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>11(17.2)</td>
<td>2.42±1.07</td>
</tr>
<tr>
<td><strong>Super speciality</strong></td>
<td>16(24.6)</td>
<td><strong>3.1±0.98</strong></td>
</tr>
<tr>
<td>Others (Paeds,O&amp;G)</td>
<td>5(5.3)</td>
<td>2.43±1.03</td>
</tr>
<tr>
<td>Statistical test</td>
<td>X2: 32.22 df:4 p&lt;0.000</td>
<td>SSB:40.02 df:3 p&lt;0.000</td>
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times [OR: 13.8 (7.3 - 25.8)] more likely to have installed an EHR in the clinic

- Most (86.3%) thought - lack of time was the major barrier and nearly 50% – disagreed that cost is not a barrier
- Data entry - a cumbersome process - reasons for not installing a computer in their clinic

<table>
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<tr>
<th>POTENTIAL DETERMINANTS</th>
<th>ADJUSTED ODDS RATIO</th>
<th>P VALUE</th>
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<tbody>
<tr>
<td>Speciality practice</td>
<td>1.9(1.15-3.12)</td>
<td>0.011</td>
</tr>
<tr>
<td>Super speciality practice</td>
<td>8.18(2.57-5.99)</td>
<td>0.000</td>
</tr>
<tr>
<td>Presence of computer professional in the social circle</td>
<td>3.93(1.67-9.26)</td>
<td>0.002</td>
</tr>
<tr>
<td>Female practitioners</td>
<td>0.493(0.27-0.87)</td>
<td>0.016</td>
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</tbody>
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CONCLUSIONS

– low priority

• Existing knowledge by training influences more positively in practicing a new technology in their clinical practice

• Limitation - cross sectional study - difficult to establish temporal assoc. between knowledge and usage

• Major perceived barriers - technical related issues

• Significant determinants of usage
  – Practice speciality,
  – income,
  – presence of a computer professional in the family and
  – gender - significant determinants of usage
SCOPE

students in medical school

• Encouragement by government for using computers in clinic – policy design
• Regulations for mandatory maintenance of electronic records
• Involving professional bodies in govt. programs – Public private partnership – ehealth
• More research into the usability – patients & doctors – potential determinants – diffusion of technology in practice
THANK YOU FOR YOUR ATTENTION

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