Diagnostic Errors and Difficulties in Primary care

Why Diagnosis is so important?

- Primary care practitioners encounter a wide variety of complex disease presentations
- Diagnosis sets the treatment journey of the patients
  “Getting the right Diagnosis is central to providing safe, high quality care”
  NASEM, 2015

How do we reach a diagnosis

- Diagnosis is nothing but a decision making
- Cognitive intelligence is necessary to reach a diagnosis

Cognitive intelligence

- Cognition – is general awareness
- Intelligence – is the ability to learn and use the knowledge
- Cognitive intelligence utilizes Dual decision making model of the mind – System 1 and System 2

System 1 VS System 2

<table>
<thead>
<tr>
<th>System 1</th>
<th>System 2</th>
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<tbody>
<tr>
<td>Fast</td>
<td>Slow</td>
</tr>
<tr>
<td>Unconscious</td>
<td>Conscious</td>
</tr>
<tr>
<td>Automatic</td>
<td>Effortful</td>
</tr>
<tr>
<td>Everyday decisions</td>
<td>Complex decisions</td>
</tr>
<tr>
<td>Error prone</td>
<td>More reliable</td>
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<tr>
<td>Intuitive system</td>
<td>Analytic system</td>
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Diagnostic error

- Arthur Elstein, a cognitive psychologist reported that the incidence of diagnostic errors is 10-15%
- Medical autopsy studies identified medical discrepancies in 10% cases – IOM, 2015
- 5% of US adults who seek out patient care encounter diagnostic error – IOM, 2015
Diagnostic Error

- Missed, inappropriately delayed or wrong diagnosis.

“ failure of a planned action to be completed as intended (error of execution) and use of a wrong plan to achieve an aim”

Institute of medicine, 2004

Reasons of diagnostic errors

- Non specific presentations
- Atypical presentations
- Environmental factors
- Provider factors

Diagnostic errors – Causes

- No – Fault errors
- System errors
- Cognitive errors

Cognitive errors

- Framing effect
- Anchoring bias / Confirmation bias
- Diagnostic momentum
- Availability bias
- Blind obedience
- Overconfidence bias
- Premature closure
- Lack of knowledge and experience

How to prevent Diagnostic errors

<table>
<thead>
<tr>
<th>Dr. Pat Croskery</th>
<th>Dr. Geof Norman</th>
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<tbody>
<tr>
<td>- Use System – 2</td>
<td>- Use System 1</td>
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<tr>
<td>- Slow down</td>
<td>- Go Fast</td>
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- Manage the system errors
- Good History taking - OLD CART
- Strengthen System 1
- Utilize System 2 as needed
- Seek more knowledge and experience
- Use at least 3 differentials for every diagnosis
- Utilize a differential diagnosis check list
- Reflective practice – keep the list of your errors
“Genius diagnosticians make great stories but not great health care. Idea is to make accuracy reliable, not heroic”

Don Berwick