BPM+ Health Spotlight:
ACEP Covid19 ED Score & Disposition

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Any view or opinion expressed in this presentation are solely the author’s.
Background & Credits
ACEP ED Covid-19 “Scoring” Tool

- Developed by ACEP in collaboration with EvidenceCare
  - Tool [available here](#)
  - Announcement & Credits

### Emergency Department COVID-19 Severity Classification

<table>
<thead>
<tr>
<th>ID</th>
<th>Stage of Disease</th>
<th>Type of Criteria</th>
<th>Initial Classification</th>
<th>Final Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acute Illness</td>
<td>Respiratory</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>2</td>
<td>Severe Illness</td>
<td>Gastrointestinal</td>
<td>Severe</td>
<td>Critical</td>
</tr>
<tr>
<td>3</td>
<td>Critical Illness</td>
<td>Cardiovascular</td>
<td>Critical</td>
<td>Critical</td>
</tr>
</tbody>
</table>

The tool is used to determine the severity of COVID-19 cases in Emergency Departments.

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*Note: The table above is an example of the classification system used to assess COVID-19 severity.*
C19 Digital Guidelines Working Group

• Part of a broader Covid-19 response team: https://c19hcc.org/

Focus:

Agile Translation of evidence-based (Covid19) guidelines into “computable” forms

• “L2” to “L3”
“Clinical Practice Guideline on FHIR”

• Initiative companion to BPM+ Health
  • [http://build.fhir.org/ig/HL7/cqf-recommendations/](http://build.fhir.org/ig/HL7/cqf-recommendations/)

Clinical Knowledge Engineering Methodology

+ [[ BPM4+Health Languages, Tools and Principles ]]

+ FHIR Implementation Guide
Acknowledgements

• C19 Digital Guidelines Working Group
  • Brian Fengler – EvidenceCare (SME)
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  • Stephen White – Bookzurman (Knowledge Engineering)
  • Robert Lario – U. of Utah (Knowledge Engineering)
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Methodology
Approach: Problem / Knowledge First

- Clinical Knowledge
- Modeling Language(s)
- Modeling Patterns
- "Model(s)"

**Translation**
(e.g. BPM+ ↔ FHIR)

**Faithful Fit-for-Purpose Representation**

**Decomposition, Derivation**
(e.g. process → measure)
Knowledge “Assets” – Extended Semantic Spectrum / Ladder
Knowledge “Assets” – Clinical Perspective

Explicit
Implicit
Implementation
ED Model Application

Level 2 Artifacts

Case Model
(BPMN Model)

DMN+ (Strategy)

DMN+ Inference

Care Process

Pathway

Strategy

Measure

Inference
/Strategy

Inference
/Assessment

Clinical Ontology

Questionnaire

CaseFeature Def

CQL Retrieve

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Model Review
Decision Model (Example)
About OMG

- Founded 1989
- International standards development organization
- 225+ specifications
- 325+ member organizations worldwide
- 11 specifications ratified as ISO standards

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