MET: Mobile Emergency Triage System

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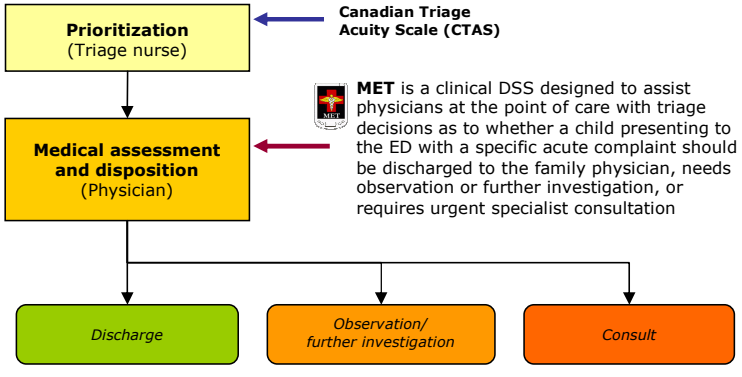
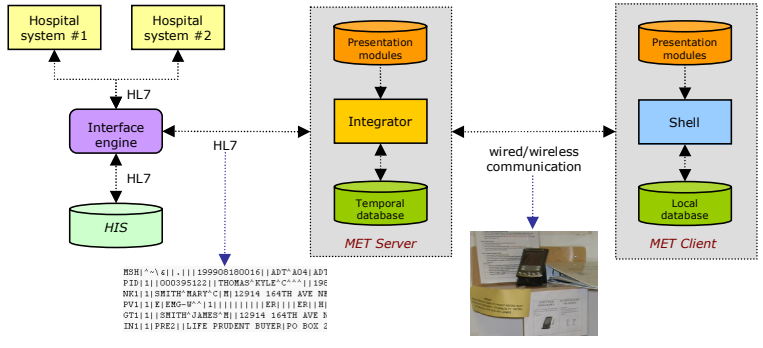


System Architecture



Clinical Trial @ CHEO

24/7 recruitment of patients with acute abdominal pain presenting to ED

Informed consent to collect patient data and make follow-up telephone call

Where possible—2 independent observations

Patients followed until final outcome is established

Methodology: Inductive Learning

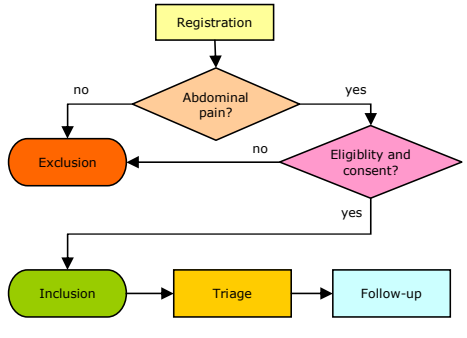
Clinical data set developed through retrospective chart study

Rough set analysis to identify certain and approximate clinical knowledge in form of the decision rules

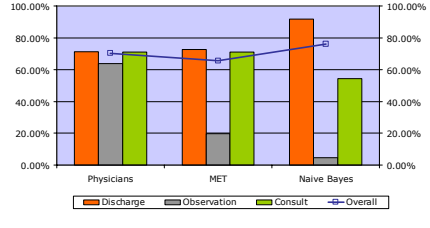
> The triage may be *consult* when one of the following occurs:
>
> 1. A male patient experiences RLQ pain and his WBC is above 20000/mm^3;
> 2. A male patient experiences RLQ pain lasting less than 24h, combined with vomiting;
> ...
>
> The triage may be *discharge* when one of the following occurs:
>
> 1. A patient experiences pain (neither RLQ nor lower abdomen) lasting less than 24h;
> 2. A patient experiences pain (neither RLQ nor lower abdomen) of intermittent character;
> ...

Rule-based classifier operating on incomplete and not fully matched data and providing equivocal recommendation with associated strengths

Trial Design



Trial Results



Comprehensive representation of clinical knowledge

Accuracy similar to physicians using a very limited amount of data

Integration with the clinical workflow and structured data capture

MET research was funded by the NSERC

Clinical trial was funded by the Physicians' Services Inc.

Acknowledgment: Jurek Blaszczynski, Poznan University of Technology; Ken Farion, Children's Hospital of Eastern Ontario; Steven Rubin, Children's Hospital of Eastern Ontario; Dawid Weiss, Poznan University of Technology