ISfTeH
International Society for Telemedicine & eHealth

Open Source working group of the International Society for Telemecine & eHealth

Problem Based Tele-Learning

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Objectives

- Improvement of medical education using a problem based approach.
- Training made accessible for medical students in remote locations, who could otherwise not afford to stay at university.
- Continued education and know-how exchanges.
- “Collaborative Care Team” : training how to work together across Internet.

Introduction

- A project of the IsfTeH, International Society for Telemedicine & eHealth, http://www.isfteh.org/
- Participation of the IFMSA is essential. Sorry, not yet much new development since the Santiago conference.
- 2 Main issues:
  - Medical knowledge: assumed to be available.
  - Training: focus on medical methodology how to manage patient information and to solve problems

(1) Access to Medical Knowledge

- Much medical knowledge is already freely available on Internet, but guidance is needed in order to find the most relevant documents for the intended study.
- The role of a teacher is to evaluate, adapt or extend documents, but no more to give lectures to passive listeners.
- The student study the recommended documents on own computer, at own tempo.

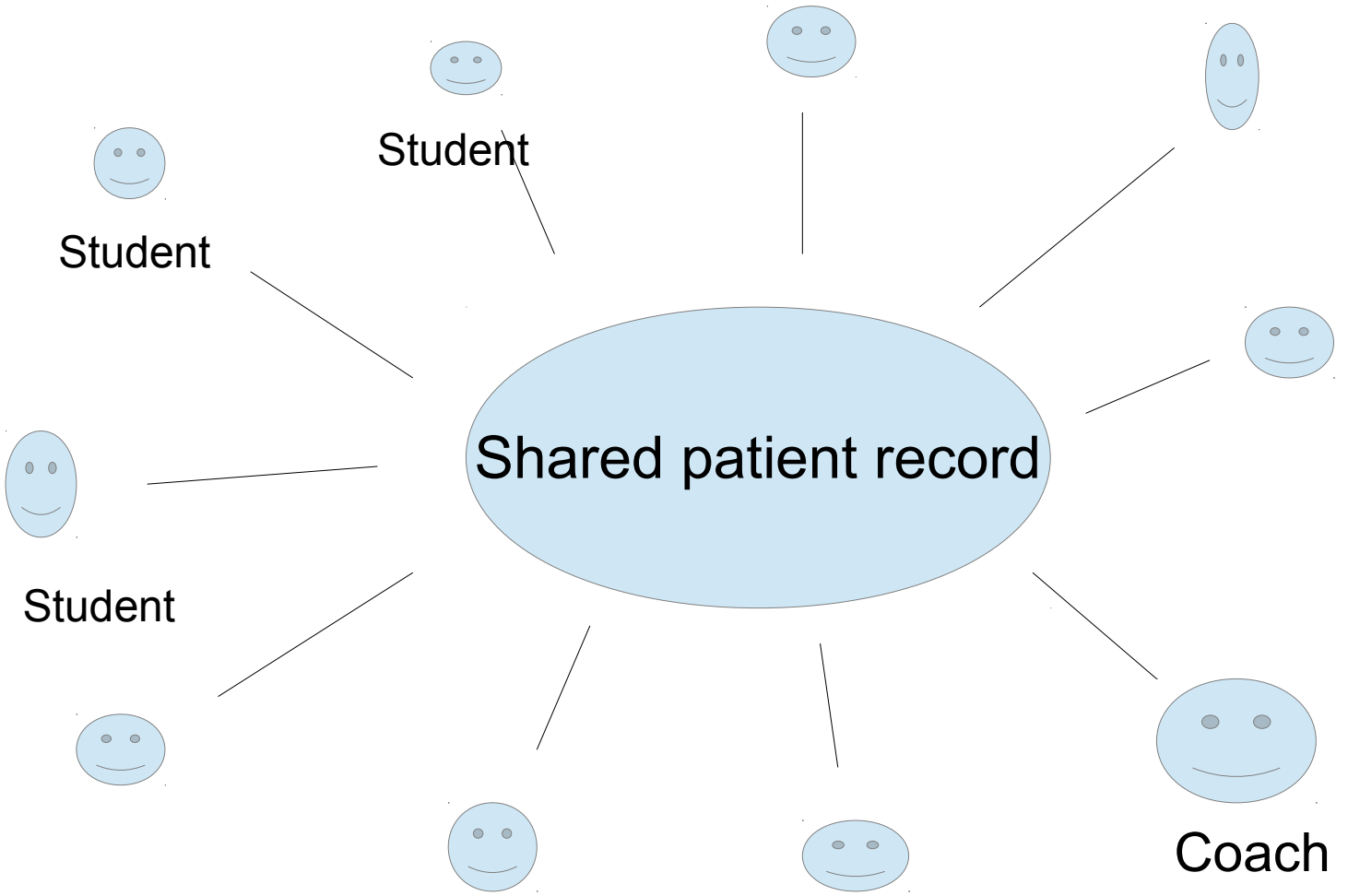
Sources of medical knowledge

- In principle based on “open data”. To be further explored, a few examples:
- En: http://www.doaj.org/ , http://www.ncbi.nlm.nih.gov/pmc/ , http://www.cochrane.org/ , http://www.biomedcentral.com/ , http://www.healthinformaticsforum.com/MOOC , etc...
- Fr: Université Médicale Virtuelle Francophone, http://www.umvf.org/
- Es: http://biblioteca.fucsalud.edu.co/index.php/bases-de-datos/libre-acceso ,
- …. : …….

(2) Training

- Having good theoretical knowledge is not enough.
- Training is an essential aspect of education.
- Exercises with questions and answers can help. However interaction with a tutor or coach remains essential.
- This is nowadays possible in a “virtual room” across Internet.

Virtual Care Team across Internet



Solving health problems : Problem Oriented Medical Record

- In order to solve problems it is of course critical to identify the problems.
- Maintenance an up to date and explicit documentation of the current understanding of the “Health Issues”.
- This methodology is a quality factor, particularly when several medical actors need to share knowledge about a common patient.

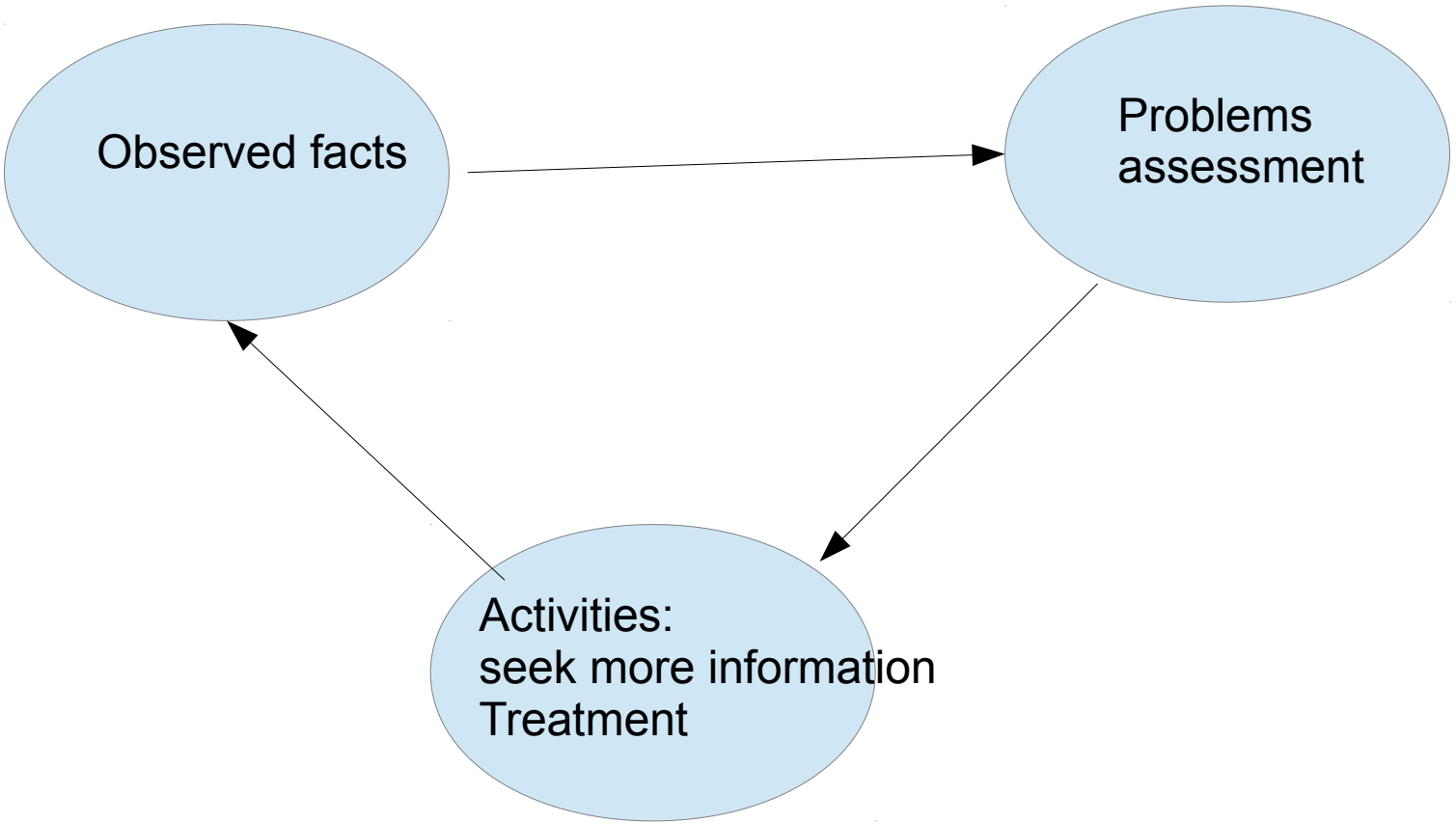
Health Issues

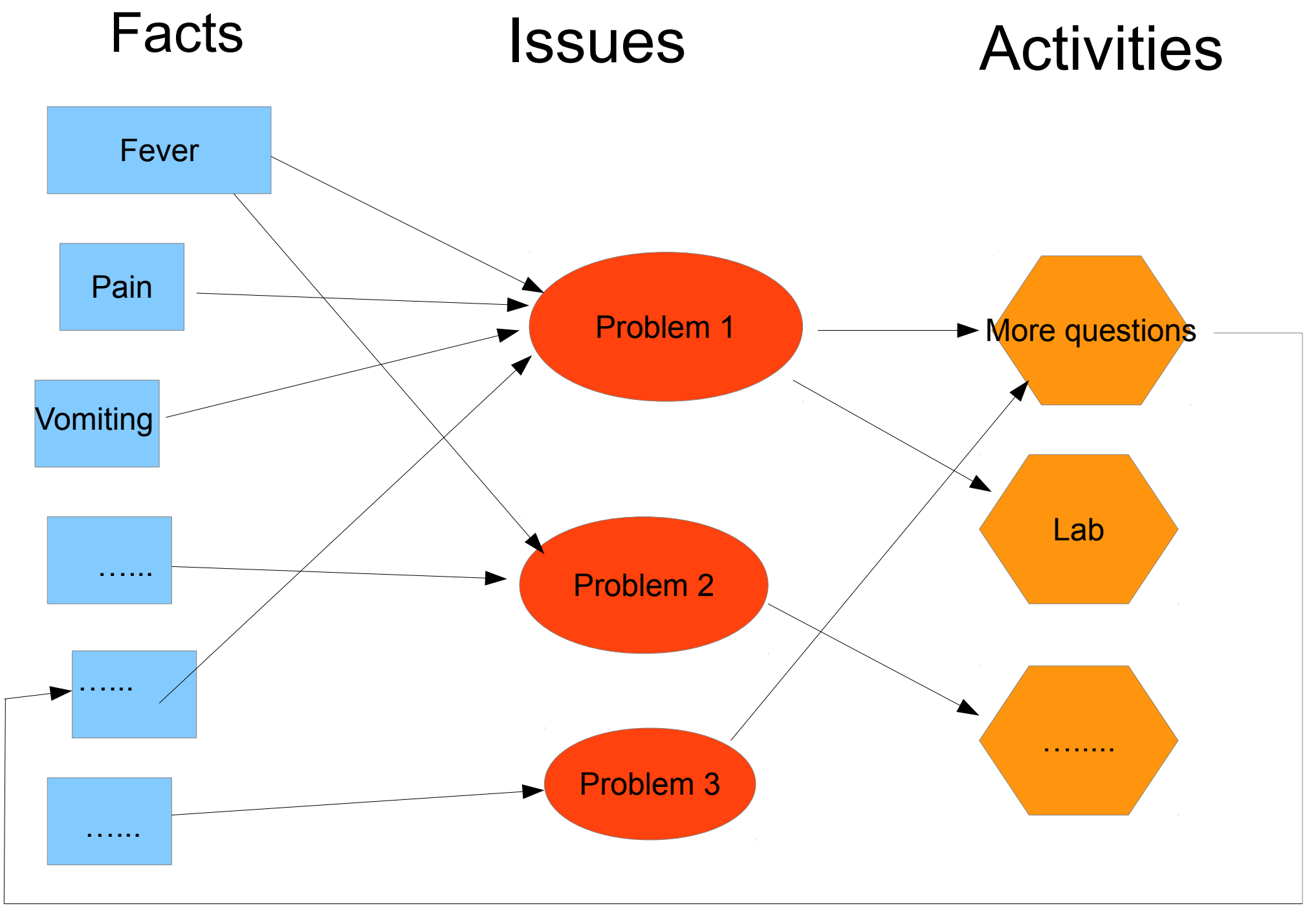
- Any health concern requiring attention :
- Fact to be further explored as complaints, abnormal finding, important risk factors, hypothesis or confirmed diagnoses.
- “Problem list”, an overview of the issues to be shared between the members of the care team, as the first page of the patient record.
- Step by step new versions when the understanding of the case progress.

Iterative Care Process

- Some facts about a case are presented starting for example with fever, pain, ...
- Given what is known up to now, what should be done next ?
- > 10'000 actions are in principle possible, as ask more questions, lab tests, images, prescriptions, etc...
- Again and again the question is to discuss the appropriated priorities, in function of expected benefits and charges.

Iterative Care Process




Facts
Issues
Activities
Fever
Pain
Vomiting
……
……
……
Problem 1
Problem 2
Problem 3
More questions
Lab
……..

Software tools

- Define the training scenario.
  The point is to support interactive dialogues between the members of a team i.e. discussions about
  “What to do next?” and Expected benefice/costs ?
- Begin with simple white board tools like MCONF, http://mconf.org/ , Etherpad, http://etherpad.org/ ,
  https://etherpad.saliez.be/p/test
  (click on the top right button to add a participant receiving a color)
- Evaluate existing medical record systems available in open source.
  Seek how to make adaptation and extension, in function of our teaching scenario.
  For example look at “GNU Health”, http://health.gnu.org/ .

Free & Open Source, Sharing software know-how

- In the international context of the IFMSA the software educational requirements are likely to be similar everywhere and should be shared.
- Open source software may be freely installed in any number of locations. No licenses costs.
- Right to make extensions in an international community sharing new developments.
- ...

Project Economic Model

- The healthcare world needs are everywhere much greater than the available resources.
- The IFMSA need training softwares tools but the goal is not to try to make profits selling softwares.
- Many software components are already available in Open Source, but extensions are still needed.
- Contributions in money and/or in kind.
  From welfare foundations, from governmental grants, with help from students in informatics and Open Source volunteers.

Call for Partners

- Group of students willing to build experience in Virtual Care Teams.
- Tutors accepting to spent time in order to coach students teams.
- Teachers accepting to make courses available on Internet.
- Sponsors understanding that the results of their limited resources will be maximized, when made available in the public domain, as “Open Source” and “Open Data”.

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Open Source Working Group
http://www.isfteh.org

Problem Based Tele-Learning.
http://www.chos-wg.eu/PBTL/PBTL.html

Register on the mailing list, send your Email to
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