Medical documentation: goals

- Recording the process flow of healing
- Supporting the doctor’s memory at remembering
  - the patient (as person)
  - the disease (complaint, syndrome, cure)
  - the protocol
- Realising the communication among doctors and nurses (continuity)
- Preventive health care (immunisation, risk factors)
- Quality assure
- Background for court of justice
- Basics for financial accounting (e.g.: coding)
- Prospective researching (filtering, selecting patients)
- Retrospective researching

The procedure of curing: hypothetic-deductive approach

- The patient ‘brings’ his/her complains and problem
- Positioning (anamnesis, status, result of examinations)
- Analysing and interpreting the data
- Standing up hypothesis/assumptions:
  1. What imply the signs: listing the potential diagnosis
  2. ‘differential diagnose’: excluding diagnosis
  3. The rest: the list of possible diseases
- Building upon the hypothesis, attempting to collect further data and starting the therapy
- Checking and re-examining the hypothesis by the data of further examinations and the outgo of applied therapy

The process flow of healing

- Anamnesis
- Problems
- Plans for diagnosis and therapy
- Decisions
- Medical history
- Reports
- Medical protocols
- Medical attendance
- Medical attendance
- Nursing protocols
- Nursing protocols
- Medical attendance
- Medical attendance

The medical chart

1. Admission report: complains and status of the patient, the supposed diagnosis and the plan for examinations and therapy
2. Decursus (course/process): diary, complaints and change of state, modified and actualised diagnosis
3. Closing report: Final diagnosis and the Epicrisis (summarising the medical case): examination results (first/last), further advised therapy (for GP or other health provider), further plan for curing

Administrative admission

- Patient’s identification
- Personal data
- Affiliations
- Social data
- Registering the case (health provider, department, date and time)
Clinical admission

• Complains, main problem – short description of the complains and syndromes as reason of hospitalization
• History of the present disease – chronological note of the problems of the patient (supplementing with the relevant complaints and syndromes for the differential diagnose).
• Earlier diseases – draft of the patient’s earlier medical problems and their cure

Clinical admission

• Family anamnesis – enumerating the diseases of parents/direct family members. Especially, the inheritable diseases or those, which appearance mark diseases
• Social anamnesis – short description of the social state of the patient. Note at first the circumstances, could influence the appearing the disease, or may affect his/her further fate
• Other organic complains – checking questions over the organs, not noted by the patient spontaneously
• Physical examination – reporting the physical examination, done by the doctor

Clinical admission

• Admission diagnosis: starting hypothesis, impressions, summarising opinion, based on the first examinations
• Plan for examination and therapy: role of protocols!

Medical visit / decursus

Sorting principle: time
S: subjective - complaints of the patient
O: objective – observations of doctor (severally, by problems)
sometimes the examination results and operation report are attached here also
E/M: Evaluation and (if needed) modification of plan (severally, by problems)
Body temperature chart is also important part of the decursus!

Closing report

Summary report on the healing of the patient
Diagnostics
• hospitalising diagnosis
• admission diagnosis
• main diagnosis for the cure
• co-morbidity
• complication
• basic disease, caused the decease
• direct reason of the decease
• etc.

Proposals for the patient after the hospitalisation, such as
• further treatment (for example: medicines)
• medical orders (date, place, etc.)

Any other …

• Nursing documentation;
  – Often contains very much particular information about the daily problems and the changes of status of the patient
• Documentation of results of several measures (e.g. ECG, EEG, spirometry, endoscopy, etc.);
• Laboratory results;
• Images and reports of medical imaging processes (X-ray, CT, MRI, PET, etc.)
• Diet
• Administrative notes (such as patient transfer, moving, reports on data handling);
• etc, etc., etc.
Data written by

- Personnel
  - doctor
  - nurse
  - paramedic personnel, ...
- Machines
  - Laboratory reports are printed by automats
  - Video records, photos, multimedia output

Question: Validity checking?

Paper based documentation

- Finding (lost, someone used sometime, somewhere)
- Hard to find a GIVEN datum (it can be badly organised)
- Readability (old paper, ink, handwriting, abbreviations)
- Actuality (where to write when the file is not at hand?)
- Only one person can read in the same time
  - Redundant (repeated input in several format)
  - Data mining impossible (for example: different patients with same properties)
- Passive (lack of automatic decision support)

Electronic patient record

- Accessibility: speed, distance, simultaneous usage
  - In the case, if that is only a digitalised version of the paper based documentation (scanned sheets)
- Forms (structured)
- Readability
- Simplified data input (data reusing)
  - redundancy may be eliminated
  - able to keep from the unreasonable, repeated examinations (patient pain, money)
- More effective functioning

Electronic patient record

- It can be used by many person in the same time from different location. Aggregated data can be used also.
  - Closing reports, structured body temperature charts, nursing diaries
  - Screen style may follow the content
- Automatic input checking
  - Value control (potassium (kalium)=50)
  - Formal checking (7 digit telephone number)
  - Calculated value (BMI)
  - Consistency check (pregnant man)
  - Automatically calculated values, alerts
  - Semantic and syntactical check

Data dimensions

- Dimensions: who, whom, where, when, why, how, with what result, for how much, ...

Reporting dimensions:
- Time oriented: chronological order
- Source oriented: by the source of the datum (GP, sending department, nursing department, laboratory, doctor, nurse, co-operating person, social environment, geographical location, etc.)
- Problem oriented: protocol check, healing profile
- Patient oriented: patient’s history

That’s All Folks!