Bedside scanning, the final frontier

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Conflict of interest:

- Nothing to disclose

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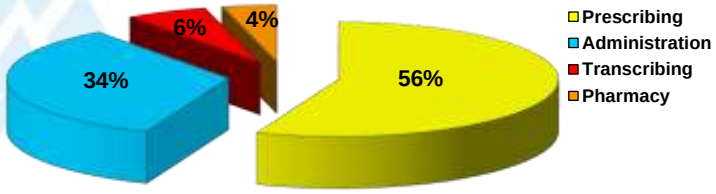
Medication errors…

- Some numbers
  - 44.000 – 88.000 deaths/year by medical errors
  - Extrapolation for Belgium (11 million inhabitants):
    - 1000 deaths / year (from which150 due to medication errors)
    - € 2.500.000 / year for 700 bed hospital
  - Avoidable ADE in 2 % of the admissions
- Origin of medication errors



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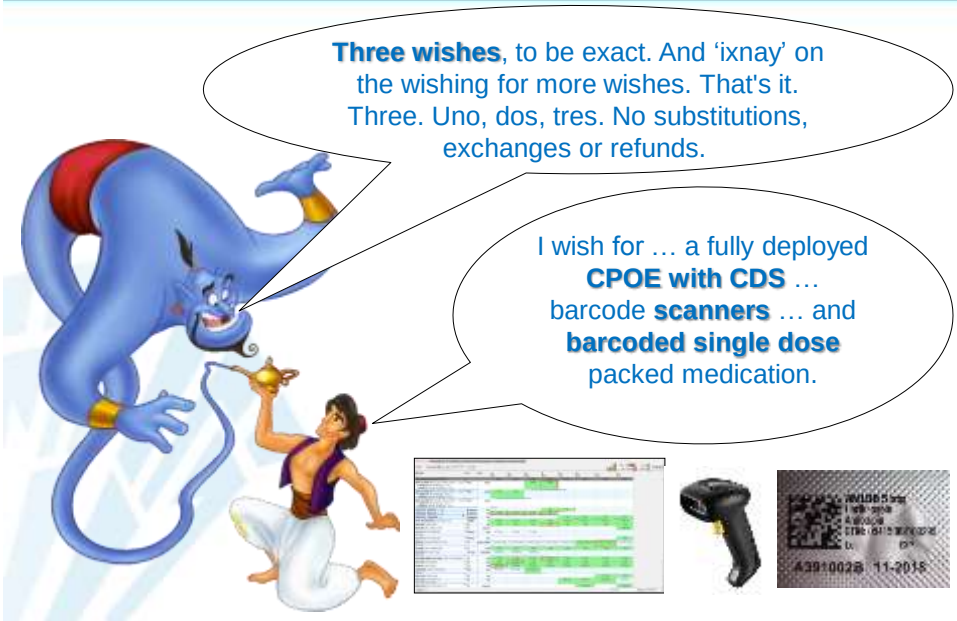

How does BSS work ?

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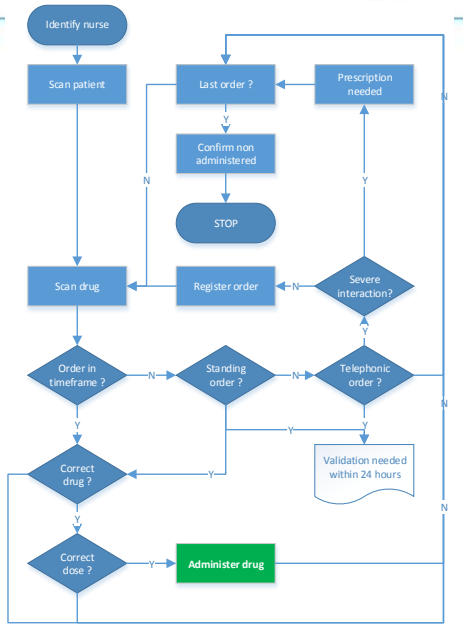

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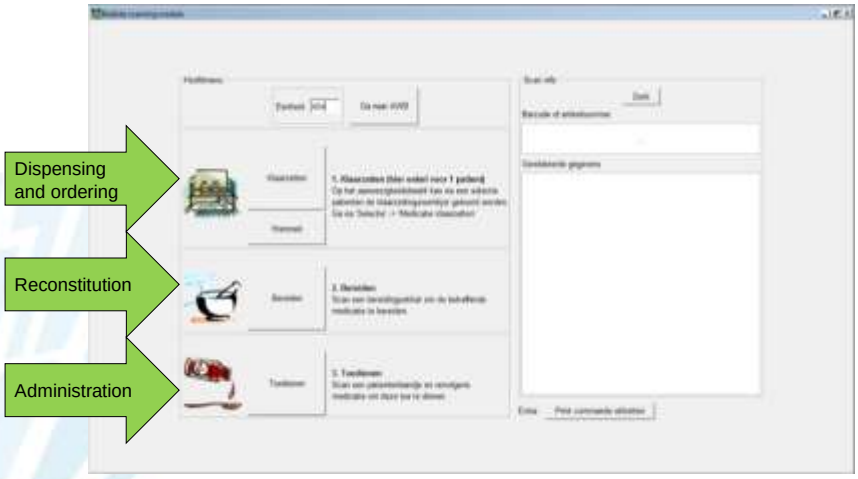
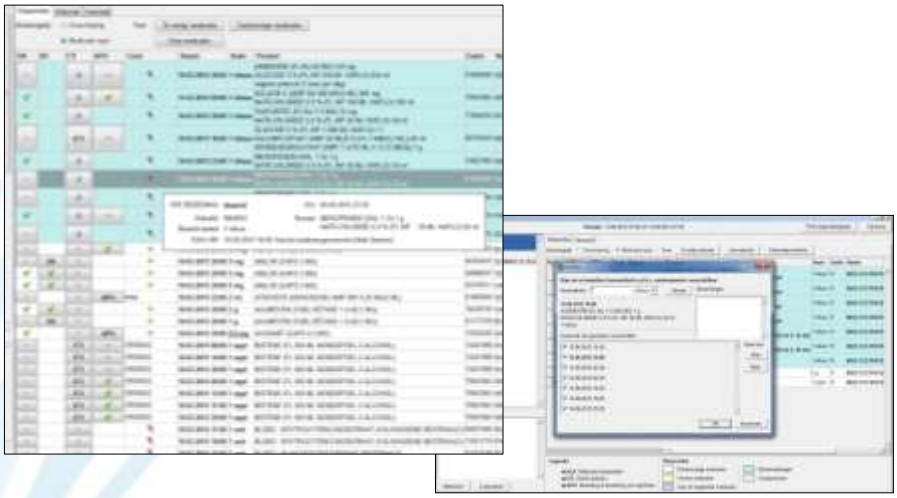
Bedsidescanning in practice …



Dispensing and ordering (ward)



Dispensing (pharmacy)

Check of appropriateness (risk analysis)

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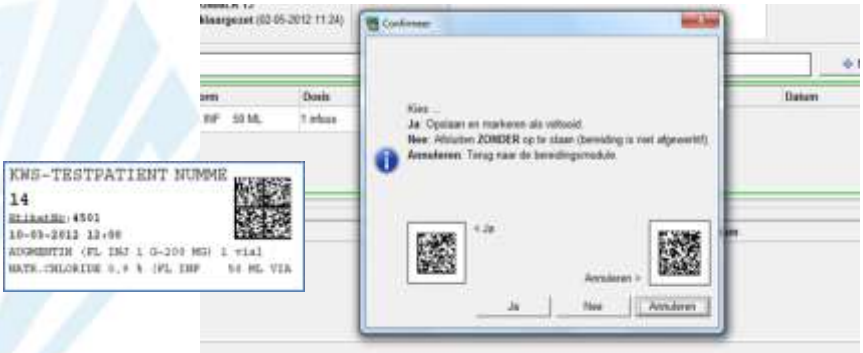
Reconstitution

- Barcode verification of every ingredient
- Reconstituted medication gets barcode



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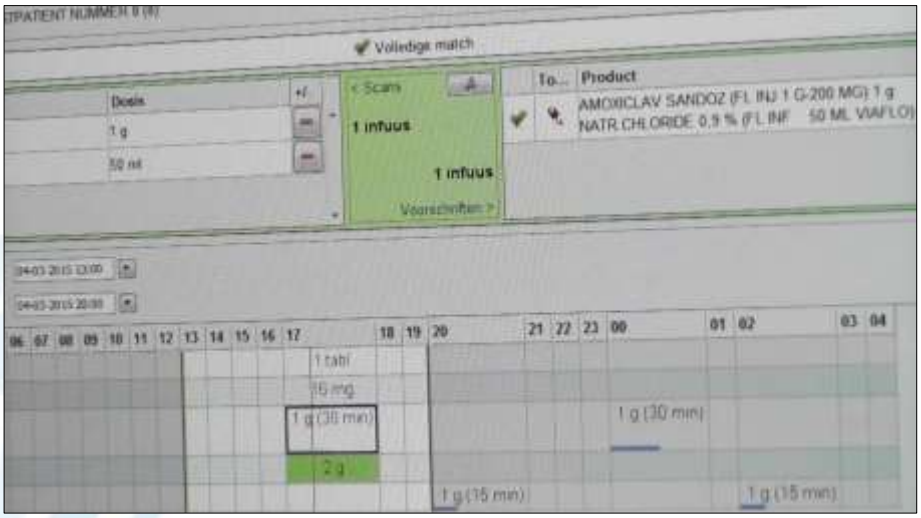
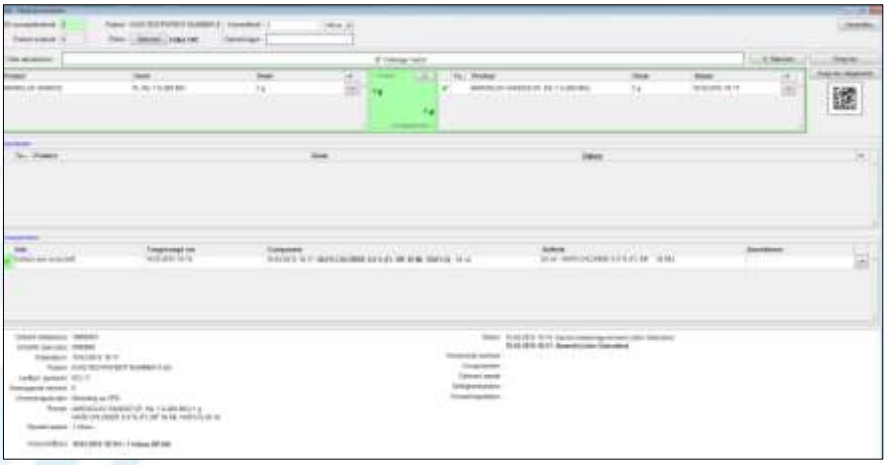


Administration

- “Intelligence”, not just administration

Exact match … the easy part



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Amoxiclavulanic acid 1000 mg …

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Urgent ? Reconstitution bedside

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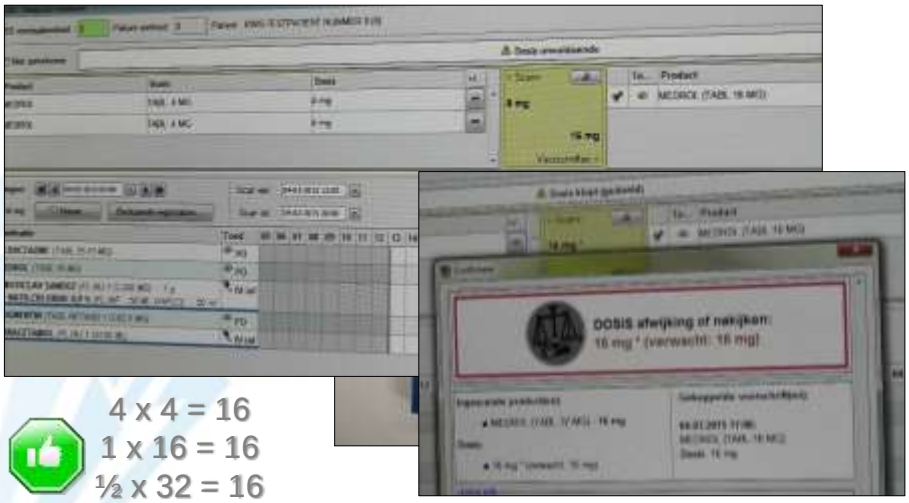
Methylprednisolone 16 mg ?



4 x 4 = 16
1 x 16 = 16
½ x 32 = 16

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Paracetamol 1000 mg oral

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Carbamazepine 200 mg oral

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Amlodipine 5 mg oral

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What-irizine ?

- Cetirizine 10 mg
  (racemic)

- Levo-cetirizine 5 mg
  (l-enantiomer)

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Multidose products ?

Every scan = a bottle or a tube ?
Every scan = nurse overrule volume ?

"Reconstitution" → linked to a patient & prescribed dose

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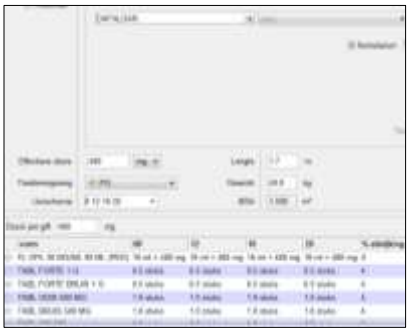
Simple mathematics ?

- Tacrolimus 9 mg
  - Prescription versus administration
    - Different # lines *(9 = 5 + 3 +1 mg)*
    - Show one line to enhance readability and overview of therapy

- Dafalgan 480 mg
  - Suggestion dose rounding
  - % mismatch
    - Relevant decimals
    - Compounding possible



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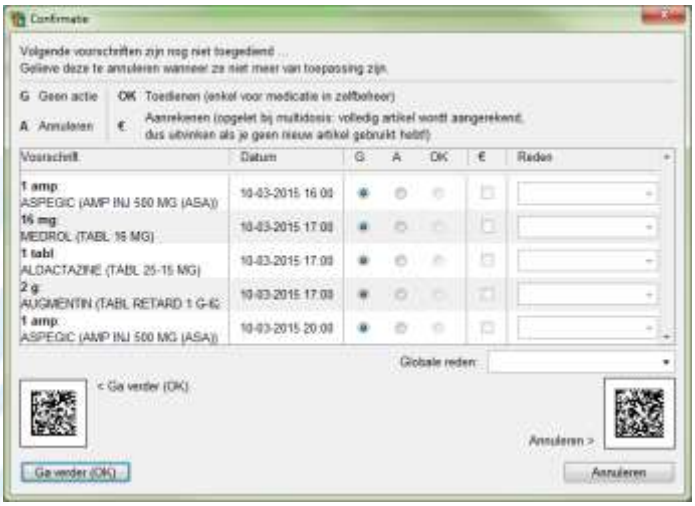
Nothing forgotten ?



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Does it work ?

- **YES it works !**
  - Wrong patient
  - Wrong product
  - Wrong dose
  - Wrong time of administration
  - Wrong timeline cytotoxics
  - Double medication or dose
  - Contraindications and allergies for (standing) orders

  - Different patient incident reports (FONA)
  - Follow up use of decision support CPOE

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