# Closing the Gap

## Integration of Inpatient and Outpatient Pharmaceutical Care

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Hospital pharmacists facing new demands – transform your pharmacy team!

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# Disclosure

- Nothing to disclose

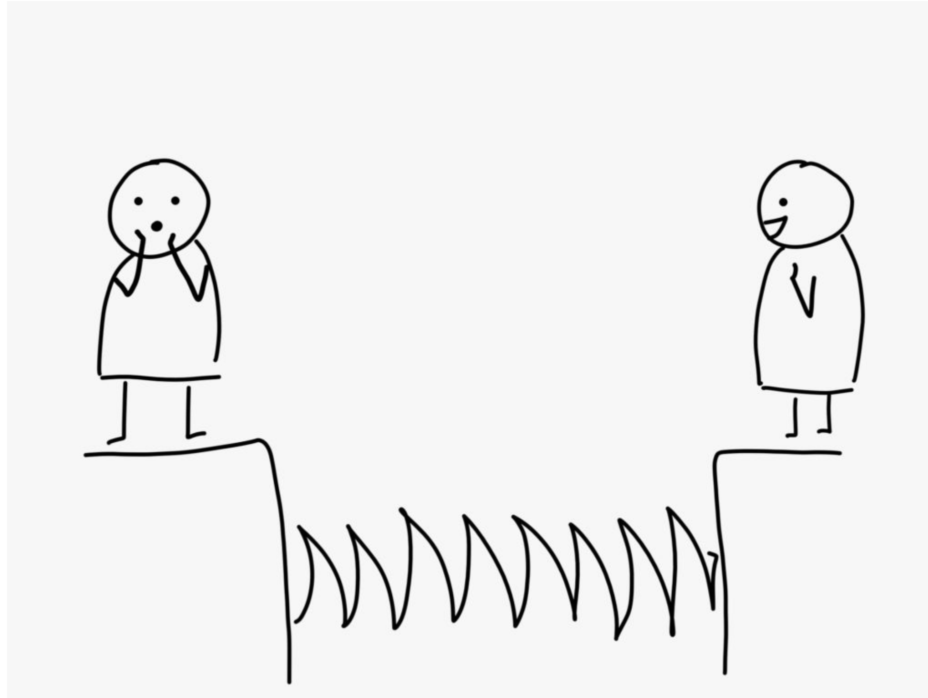
# True or False

1. Medication errors predominantly occur during transitions of care

2. Integrating inpatient and outpatient pharmaceutical care fails to increase staff efficiency

3. Making choices in our activities is necessary for increasing medication safety and patient centered case

# Transitions in Healthcare



# Transitions in Healthcare

- 1 out of 30 patients are exposed to medication errors (ME)
  - 25% clinically severe or life-threatening
- Median rate of ME at transitions of care is 50%
  - Increased risk of ME among patients transitioning (OR 1.85)
- Caused by insufficient communication, incomplete and inaccurate information transfer

Hodkinson A. BMC Med 2020; Tully AP. Crit Care Med 2019; Desai R. Am J Geriatr Pharmacother 2011

# Medication discrepancies

- Differences between patient's actual medication use and the listed medication
- Up to 100% have at least one MD
  - 25-50% cause severe harm
  - 2.5 increased risk of rehospitalisation within 3 months after visit

Alqenae FA. Drug Saf 2020; Abdulghani KH. Int J Clin Pharm 2020; Redmond P. Cochrane Database 2018.

# Traditional hospital pharmacy

- Traditional tasks
  - Pharmaceutical care/medication safety
  - Compounding/manufacturing
  - Laboratory (Therapeutic Drug Monitoring, Toxicology)
  - Logistics
  - Quality control
- Hospital pharmacists, pharmacy technicians
- Serving hospitalised patients, HCPs working in hospital

# Out-of-Hospital Pharmacy

- Outpatient pharmacy located in the hospital
- Tasks:
    - Pharmaceutical services/medication safety
    - Logistics
    - Quality control
    - Compounding (limited)
- Pharmacists, pharmacy technicians
- Serving patients transitioning from in to outpatient settings and patients visiting the outpatient clinic

# Consequences

- Different pharmacy teams introduce additional communication and repetition of activities
- Not focused on patient centered care

- Challenges need collaboration and integration:
  - Shorter hospital stay by early discharge
  - Continuation of treatment in outpatient setting (eg OPAT)
  - Increasing complexity of patients
  - Lack of adequate electronical communication between in- and outpatient settings

# Integrate and collaborate

- Delivering patient centered pharmaceutical care by one team
  - Centralised pharmaceutical services/medication safety
  - Compounding for patients individually
  - Integrated logistics
  - Integrated quality control
  - Integrated therapeutic drug monitoring

# Practical implications

- Pharmaceutical services/medication safety
  - One single team of pharmacy technicians
  - In the morning working at the out-of-hospital pharmacy; in the afternoon at the medical department
  - Pharmacy case-managers guiding patients throughout hospitalisation, discharge and safe medication use at home
- Compounding
  - One single team of pharmacy technicians
  - Centralised or at the ward compounding medication
  - Administration in the hospital or at home

# Practical implications

- Logistics
  - One single team of pharmacy technicians
  - Centralised ordering at wholesaler, centralised supply, redistribution throughout hospital
- Quality control
  - One single team of quality control
  - Integrated quality indicators
- Pharmacists’ activities
  - Patient centered, irrespective of patient’s location
  - Integrated activities

# Results

- Better overview of patient’s situation
- More targeted, patient centered care
  - Not only during admission, but also @home
- Staff shifts were more demanding
  - Focus on what really adds value
  - Separate administrative tasks from pharmaceutical care
- Reduction in staff shifts by 30%
- Gives opportunities for knowledge development

# But…choices to make

- Change is difficult; it is a team effort
- Consider and take into account
  - Views of others regarding you as pharmacy
  - Your current added value in delivering pharmaceutical care (delegate tasks!)
  - How efficient is your backbone organised
- Related to your long-term goals and the span of control

- Relocate manufacturing of medication. Focus on compounding.
- Relocate TDM/toxicology (no lab at the pharmacy dept)

# Take home messages

- Medication errors and medication discrepancies occur frequently during transitions of care
- Integration of inpatient and outpatient pharmaceutical care may have the potential
  - to increase efficiency in pharmacy workflows
  - to result into better patient centered care
  - to add additional pharmaceutical value
- To reach a next step in pharmaceutical care, you need to make fundamental choices