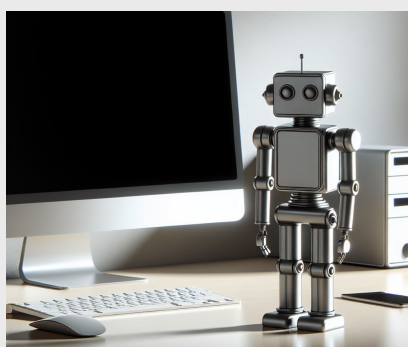


Manual counting in connection with the mixing of intravenous antibiotics is now being replaced by a software robot

What?

- The hospital pharmacy assists wards in mixing IV antibiotics.
- There was a desire to digitize and streamline the workflow through development of a software robot.



Why?

Mixing of intravenous antibiotics

- The pharmacy helps mix selected IV antibiotics for patients admitted to inpatient wards.
- The mixing takes place centrally and is then distributed to the relevant wards.

Manually counting

- The number of prescriptions for each ward was manually counted every morning and noon before the mixing process.
- An estimated time consumption for manually counting is about 1 hour per day per location.
- The goal was to move away from manual counting and towards an automated solution.

How?

Development of a robotic process automation (RPA) solution

- The team: two location from the pharmacy and the region's robotic process automation (RPA) developers.
- The pharmacy set requirements and expectations for the RPA solution.
- The RPA solution use prescription data from the electronic prescribing system.
- The programming was revised and adjusted several times to obtain the most accurate prescription data.
- To verify the robot's counting, manual counts were conducted multiple times during the process.
- The development spanned 9 months.

	Piperacil / Tazobactam (J:01:C:R:05)	Cefuroxim (J:01:D:C:02)	Cloxacillin (J:01:C:F:02)
Department	4 G	1500 MG	1 G
Orthopedic Surgery Ward		2	1
Surgical Ward 2, Lower Surgery		23	
Surgical Ward 2, Upper Surgery		2	
Surgical Ward 1, Upper Surgery		4	
Medical Ward 1, Lung Diseases		3	2
Medical Ward 1, Internal Medicine		6	
Medical Ward 2, Geriatrics		8	
Medical Ward 2, Internal Medicine		4	
Cardiology Ward		10	
Total		62	3

Figure 1



What was achieved?

- The RPA solution is now used at two locations.
- A report is emailed twice a day, after which antibiotics are mixed and distributed to the relevant wards (figure 1).

Benefits

- Frees up time for other tasks
- Data is more up-to-date
- Medication waste is minimized

What next?

- A similar setup for a central mixing unit at other hospitals are planned, the RPA solution can be implemented from the start.
- The RPA solution to be used at other locations/ departments, with different medications for example, monitoring of inhalation preparations or anticoagulant medications.

