

# USING AN ELECTRONIC ALGORITHM TO IDENTIFY THE MOST RELEVANT PATIENTS FOR MEDICATION REVIEW

Olesen C

Clinical pharmacy, The Regional Hospital in Horsens, Denmark  
Contact: chaoln@auh.rm.dk

## WHAT WAS DONE?

- An algorithm, to identify patients who would benefit most from a medication review, was applied using data from the Electronic Prescribing System
- Every day the system produced a list of hospitalised patients considered relevant for medication review

## WHY WAS IT DONE?

- Manual screening of patients relevant for medication review was time-consuming
- Medication reviews by clinical pharmacists were therefor only performed on a few wards
- No evidence-based criteria for selection of patients was used

## HOW WAS IT DONE?

- Medication Risk Score (MERIS), a validated algorithm to identify patients at high risk of medication errors, was implemented using data from the Electronic Prescribing System
- Each hospitalised patient's risk score was automatically calculated, and a list with risk scores was generated
- Patients with highest risk were selected to receive a medication review by a clinical pharmacist

## MEDICATION RISK SCORE ALGORITHM

Risk factor	Intervals	Points	Max. no of drugs that counts
Reduced renal function	eGFR > 60	0	
	60 > eGFR > 30	5	
	eGFR < 30	10.6	
No. of drugs	0-5	0	
	6-11	5	
	>12	10.6	
No. of drugs with	Low risk of harm	0.25	3
	Medium risk of harm	0.5	8
	High risk of harm	1	7
	Low + medium risk of harm	0.25	12
	High risk of interaction	0.5	2

eGFR, estimated glomerular filtration rate.

## MEDICATION RISK SCORE AS AN ELECTRONIC ALGORITHM

Patient ID	Navn	Afsnit	Medic... en.	eGFR	Lægemiddel score	Skade 1	Skade 2	Skade 3	Interaktion 1 & 2	Interaktion 3	Risikolege midler score	Samlet score
6845916	Skjult	Kirurgisk Sengseafsnit	Null	10,6	10,60	0,75	3,00	6,00	3,00	0,00	12,75	33,95
6231038	Skjult	Kirurgisk Sengseafsnit	Null	10,6	10,60	0,50	3,00	2,00	2,25	0,00	7,75	28,95
7074824	Skjult	Kirurgisk Sengseafsnit	29-01-18	5	10,60	0,50	4,00	3,00	3,00	0,00	10,50	26,10
6208822	Skjult	Kirurgisk Sengseafsnit	Null	0	10,60	0,75	3,00	5,00	3,00	0,00	11,75	22,35
482571	Skjult	Kirurgisk Sengseafsnit	Null	0	10,60	0,25	2,50	5,00	2,75	0,00	10,50	21,10

## WHAT HAS BEEN ACHIEVED?

- Electronic uniform screening has been implemented in our clinical pharmacy service
- Our limited time is now used carrying out medication reviews on patients with the highest risk of medication errors

## WHAT NEXT?

- The electronic version is used on two wards
- Next step is to introduce and implement the use of MERIS on more wards at our hospital and other hospitals in our region



CP57178