## Implementation of an OBJECTIVE STRUCTURED **CLINICAL EXAMINATION and Evaluation Checklists** at an Institute of Clinical Pharmacy

of

medical



## **Background and Objectives**

OSCE, i.e. objective structured clinical examination

has proven to be a reliable and valid tool for

students. As the practice-oriented education of

pharmacy students is introduced in the curriculum

of clinical pharmacy, the assessment of training

success has also to be re-structured. Up to now,

there are very few only voluntary-based OSCEs

being performed at the faculties of pharmacy in

The objective of this study was the implementation of a reliable and valid OSCE - using self-developed

evaluation checklists - for pharmacy students at the

**Material and Methods** 

38 students - in the 6th semester of their pharmacy

studies - participated in the OSCE during the

summer term of 2014. The students' training success was assessed by experts (pharmacists) using self-developed evaluation checklists. Figure 1 represents the checklist for the inhalation unit. The checklists are identical except for the pharmaceutical content which depended on the examination unit. Points would be awarded by the evaluator if the student used the appropriate communication and solved the pharmaceutical problem ("yes" = 1 point; "no" = 0 points). If there was no distinct separation between "yes" and "no" possible the scoring system gave multiple choices for the evaluator by using check boxes (as seen in

assessing communication skills

Germany.

University of Mainz.

B. Stollhof M. Bayer I. Krämer

Johannes Gutenberg-University Mainz Staudinger Weg 5 55128 Mainz Germany

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bettina.stollhof@ unimedizin-mainz.de

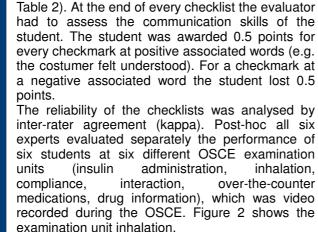


Table 1: Scoring system of the quality of communication and the questions by using check boxes (1-0 points)						
1	0,75	0,5	0			
good	middle	bad	very bad			



Figure 2: OSCE-examination unit inhalation, the student , the performer (customer) and the evaluator (from left to right)

Results

According to the results of the evaluation checklists 36 students (95%) passed the exam. The overall medium inter-rater agreement regarding the six units was moderate ( $\kappa$ =0.49). The highest inter-rater agreement was registered for the insulin administration ( $\kappa$ =0.83) and the lowest inter-rater agreement was found at the interaction check ( $\kappa$ =0.22). Table 2 shows the inter-rater agreements of all units.

Table 2: Inter-rater agreement of the six examination units

Examination units	Inter-rater agreement			
Examination units	Kappa (95% CI)	Classification		
compliance	0.44 (0.30-0.58)	moderate		
drug information	0.26 (0.18-0.39)	fair		
inhalation	0.64 (0.50-0.78)	substantial		
insulin administration	0.83 (0.70-0.96)	perfect		
interaction	0.22 (0.09-0.36)	fair		
over-the-counter medications	0.52 (0.38-0.65)	moderate		

OSCE-Examination SS2014 Checklist - Inhalation	JOHANNES GUTE UNIVER	EN B E F SITÀT '	G	JG	U	
Author: B. Zeiter	page 1					
Surname, first name						
Quality of communication		v	es	П	10	
· · ·						
Customer greeting polite and friendly Conversation topic discussed						
Appropriate body language						
Face-to-face interaction				0		
Active listening and empathy			-	<u>–</u>		
Clear end of conversation		-	-	_	-	
Questions				no		
Meaningful questions						
Understandable questions						
No negative words which effect conversation						
Professional content		y	es	n	10	
Customer was asked to demonstrate the inhalation						
Explanation of the use of the checklist						
Identification of errors:						
exhalation too fast, pursed lip technique						
Customer asked to demonstrate the inhalation again aft	er training					
Subjective assessment of communication						
Atmosphere: 🗆 relaxed 🗖 neutral 🗖	I tense 🗖					
	well advised					
		nsecu				
Impression of pharmacist:  confident overts incompetent		nsecu	re			
Comments:			Time:			
"Customer": Evaluator:			Points:			
Passed Failed			lote			
		P	ote			

Figure 1: OSCE-Examination , Checklist - Inhalation

## Conclusion

The design of the OSCE proofed to be favourable and the developed evaluation checklists turned out a reliable fair assessment tool for as communication skills in clinical pharmacy at the University of Mainz.