Actor-based triage training for pharmacy students

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Abstract

Background and Purpose: Triaging as a service in pharmacies aims to direct clients towards the right care stream and reduce the workload of other care givers. It is also a prerequisite for newly extended pharmacists' dispensing competencies. Triaging requires the application of clinical knowledge for quick decision-making and effective communication skills, which may be practiced in actor-based training. We aimed to evaluate our newly established actor-based trainings on acute respiratory and abdominal symptoms for pre-registration pharmacy students in terms of student feedback and effectiveness.

Educational activity and Setting: The trainings included passive lectures on history taking, clinical examination, and triage, and active learning segments involving case simulation with actors. Actors were recruited from a drama class and received training

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to establish their medical knowledge for improvised reactions. The simulations portrayed different personalities of pharmacy clients, which later included actors with little time and understanding for history taking. During the simulations, students had to diagnose the clinical pictures by themselves, applying their newly acquired knowledge. After the simulations, the focus was on mutual feedback between actors, students, and moderators with an emphasis on perspective change and communication. Simulations were held online. Evaluation data was collected with a feedback form and a pre-to-post questionnaire. A one-sided Wilcoxon signed-rank test was used to compare students' pre-to-post changes in self-reported confidence levels.

Findings: Students majorly described the training with the actors to be very realistic (70.0%); they felt comfortable, but still needed to get used to the situation (50.0%); they learned a lot about themselves (50.0%); and the feedback from the actors was found to be helpful (63.3%) and beneficial for learning about their own perceptions of other people (33.3%). The changes in self-reported confidence levels were statistically significant.

Summary: This evaluation showed that actor-based training can foster pharmacy students' confidence in triaging of acute respiratory and abdominal symptoms, even when conducted virtually. Besides effectively promoting decision-making, working with actors additionally allowed to practise different communication styles and to confront students with various personalities of pharmacy clients.

Introduction

Pharmacists find themselves in a changing profession. Shifting away from other specialist competencies such as compounding, the modern community pharmacist is also a provider of pharmaceutical care, "the pharmacist's contribution to the care of individuals in order to optimize medicines use and improve health outcomes." (Allemann et al., 2014) Whilst optimizing medicines use involves services like performing medication reviews (Blenkinsopp A. et al., 2012) or medication reconciliation (Kwan et al., 2013), improving health outcomes does not always involve medicines straight away. Triaging as a service in pharmacies, where medical needs are assessed and prioritised, may direct clients towards the right care stream (Robertson-Steel, 2006) and reduce the workload of other care givers further down the stream (Paudyal et al., 2011). The British "pharmacy-based ailment schemes" have been reported to resolve medical needs in 68-94% of advised clients (Paudyal et al., 2013), whilst triaging in pharmacies overlaps with medical experts in 70-97.6% of the cases when guidelines or protocols are used (Curley et al., 2016). Similarly, a triaging service with decision trees offered by Swiss community pharmacies has been shown to achieve a resolution rate of 87.4% at three-day follow-up (Stämpfli et al., 2021). Since January 2019, Swiss pharmacists may even treat common illnesses with specified medicinal products, effectively broadening their triage outcome options. This change was brought with the updated Therapeutic Products Act and the Therapeutic Products Ordinance, which extended previously established pharmacist dispensing competencies (Federal Office of Public Health FOPH, 2019). A prerequisite for making use of these extended dispensing competencies is proper triaging and documenting of the encounter.

Proper triaging needs clinical knowledge, examination skills, and acquired competency, learned and practiced in safe training environments. Actor-based or human patient simulation (i.e., using mannequins) training accomplishes that by mirroring actual patient care in an environment with no potential harm to patients nor students (Crea, 2011; Vyas et al., 2011). Students may apply their previously established (theoretical) knowledge in situations "where clinical judgment and conflict resolution also are imperative to providing optimal patient care." (Vyas et al., 2011) In simulations, students may be confronted by an urgent patient situation (e.g., acute respiratory distress), exposing them to the stress of quick clinical decision making without risking poor patient outcomes (Crea, 2011). Simulation of hypertensive patients has been shown to improve pharmacy students' assessment of blood pressure and knowledge of pharmacotherapy, as well as generating high levels of student satisfaction and competence (Seybert & Barton, 2007). However, for a pharmacy encounter to be successful and satisfying (e.g., triaged medical needs), communication skills are required as well. But pharmacists are sometimes described to focus on instructions for use and dosing of medicines rather than patient perceptions and preferences (Koster et al., 2015).

With the seminar "Clinical Trainings," the Institute of Pharmaceutical Sciences at the Swiss Federal Institute of Technology Zurich (ETH Zurich) aims to foster competency in clinical decision-making and understanding of pharmaceutical care for real patients before and after hospitalisation. The pre-registration pharmacy students, who are placed in community pharmacies to work alongside registered pharmacists for their last year of studies, get to deepen their clinical thinking (addressing patients, history taking, questioning techniques, triage), get introduced to simple, non-invasive examinations with a special attention to triage and red flags, and get to expand their clinical interpretation of diagnostic and laboratory evaluations. Three half days of a total of six seminar days make use of simulation trainings and simultaneously focus on communication and provider-patient interaction to incorporate elements of other courses on communication into clinical decision-making and triaging. Earlier iterations of these interactive segments still invited actual patients instead of actors, which was changed with the SARS-CoV-2 pandemic. This paper presents the content of the newly established actor-based trainings and their evaluation.

Aims

The evaluation aimed (1) to assess the actor-based trainings with student feedback and (2) to measure the trainings effectiveness on confidence levels for triaging acute symptoms.

Methods

Educational activity

The seminar days started with a 5-hours passive lecture on history taking, clinical examination, triage, and basics of communication psychology (Schulz von Thun, Carl Rogers) held by a chief physician. Patient cases from visceral surgery, pulmonology, cardiology, and neurology were presented. Clinical pictures included acute coronary syndrome, acute pancreatitis, acute cholecystitis, acute sigmoid diverticulitis, acute stroke, chronic obstructive pulmonary disease, and acute allergic asthma.

After the lectures, simulations took place with two male actors, portraying real cases from a Zurich pharmacy. The actors were recruited from a drama class and received around 10 hours of specific training. This training aimed to establish the actors' medical knowledge for improvised reactions and included reading patient information material on the clinical pictures and one-to-one stage rehearsals with the chief physician for acute coronary symptom and acute pancreatitis. A group of four students were selected to overcome any potential shyness of the whole class and start the conversation whilst their peers observed, gradually stepped in, and supported. Students had to diagnose the clinical pictures by themselves, applying their new knowledge on history taking, clinical examination, and triage. The actor-based training focused on communication styles and quick clinical decision-making on supportive care and pharmacotherapy if clients with symptoms of acute coronary symptoms and acute pancreatitis presented themselves in a pharmacy. Using actors also enabled to portray different personalities of pharmacy clients: it was possible to start with grateful and willing clients and then move on to personalities who had little time and understanding for history taking. Two attending physicians, each representing one of the disciplines, moderated the students' questions. Students, actors, and moderators were able to pause the simulation at any time by saying "time out." These pauses allowed for reflections on clinical decision-making and communication style. After each simulation, the focus was on mutual feedback between actors, students, and moderators with an emphasis on perspective change and communication. For the SARS-CoV-2 pandemic year of 2021, the training had to be held online via Zoom (Zoom Video Communications Inc., 2022).

Course Feedback

Course feedback was collected after the last day of actor-based training day with a form including four items, answered on a 5-point Likert scale: "How realistic did today's training with actors seem to you?"; "How did you feel during the training?"; "How much have you learned about yourself today?"; and "How did you feel about the actors' feedback to you?". Two open-ended questions were also asked: "what did you like about training with actors today?" and "what did you not like today in your contact with the actors?".

Self-Reported Confidence Levels

For the evaluation of pre-to-post change in student self-reported confidence levels, two separate pre- and post-questionnaires were used. The questionnaires included two simple questions related to the main learning objectives of the day, answered on a 7-point Likert scale: "How confident do you feel in assessing acute respiratory distress?" and "How confident do you feel in assessing acute abdominal symptoms?" The pre-questionnaire was distributed three days before the teaching segment, the post-questionnaire immediately after it.

Statistical Analysis

A descriptive analysis was performed on both the feedback and the pre- and post-questionnaires, reporting on frequencies. Open-ended questions were summarised without specific analysis. A one-sided Wilcoxon signed-rank test was used to compare the null hypothesis of no differences between pre- and post-evaluations for students who filled in both evaluations. The minimal detectable effect given the final sample size was calculated with a post-hoc sensitivity power analysis set at 80%. To investigate differences between students who completed both questionnaires and students who

completed only one questionnaire, a two-sided Mann-Whitney-*U* test was conducted. The level of statistical significance was set at α = .05.
RStudio, version 1.3.1093 , running R, version 4.0.2,(R Core Team, 2019) was used for the analyses. Additional R packages that were used during the analyses included tidyverse (Wickham & RStudio, 2019), dplyr (Wickham, François, et al., 2020), data.table (Dowle et al., 2019), rcompanion (Mangiafico, 2021), ggplot2 (Wickham, Chang, et al., 2020), and patchwork (Pedersen, 2020). The post-hoc sensitivity power analysis was performed using G*Power 3.1 (Faul et al., 2009).

Ethical Considerations

The Office of Research, Research Ethics & Animal Welfare, of the Swiss Federal Institute of Technology ETH Zurich granted an exemption from ethics approval retroactively, as our teaching evaluation was not considered human subject research. Students had the option of not participating in the feedback and pre- and post-questionnaires, without this decision having any influence on the relationship with the lecturers. All questionnaires were submitted completely anonymously and were distributed and collected electronically before or after the training sessions by a third party not directly involved. The raw data and statistical analysis were carried out by a third party not directly involved in the seminar days.

Results

Course Feedback

A total of 30 students provided answers to the feedback form (overall return rate: 61.2%). Figure 1 shows the answers on the 5-point Likert scales. Students described the training with the actors to be “very realistic” (70.0%) or “moderately realistic” (30.0%). They “dared to try their personal way of asking questions during the training and felt good about it” (36.7%) or “felt comfortable during the training, still have to get used to the situation” (50.0%), but some “only felt a little comfortable” (10.0%). Students also “learned a lot” about themselves (50.0%) or at least “learned moderately much” (50.0%). The feedback the actors gave was found to be beneficial for “learning a lot about their own perceptions of other people” (33.3%) or at least to be “moderately helpful” (63.3%).

Figure 1: Collected feedback from pharmacy students (N = 30) on 5-point Likert scales about the actor-based teaching segments. (A) Closeness to reality; (B) Feeling comfortable; (C) Learning about oneself; (D) Helpfulness of the feedback.

The German open-ended comments to the questions “what did you like about training with actors today?” and “what did you not like today in your contact with the actors?” are translated in the Supplementary Tables 1 & 2. Briefly, students majorly praised the realistic acting by the actors, and simultaneously noted that “they also played somewhat ‘more difficult’ customers” and that “when we practise with such patients, we are certainly well prepared.” Comments concerning aspects students did not like primarily included difficulties in (virtual) communication: Lack of a natural communication flow (“[…] when you look after a patient as a group, it quickly comes across as questioning instead of a conversation from one person to another”), missing out on (non-verbal) personal contact, and interacting with actors in front of a group.

Self-Reported Confidence Levels

The return rates of the pre- and post-questionnaires are shown in Table 1. Both questionnaires were filled by 30 students, resulting in an overall return rate of 61.2%.

	Count (%)*
Pre-evaluation	44 (89.8)
Post-evaluation	36 (73.5)
Both	30 (61.2)

*Notes: *Student total cohort 2021: N = 49.*

Table 1: Return rate of the pre- and post-questionnaires.

Figure 2 depicts the distribution of the students' self-assessment answers on the 7-point Likert scales, stratified by pre- and post-teaching segment for both learning objectives, feeling confident in assessing acute respiratory distress and acute abdominal symptoms. Median and mean values are shown in Table 2, alongside the calculated *p*-values and effect sizes d.

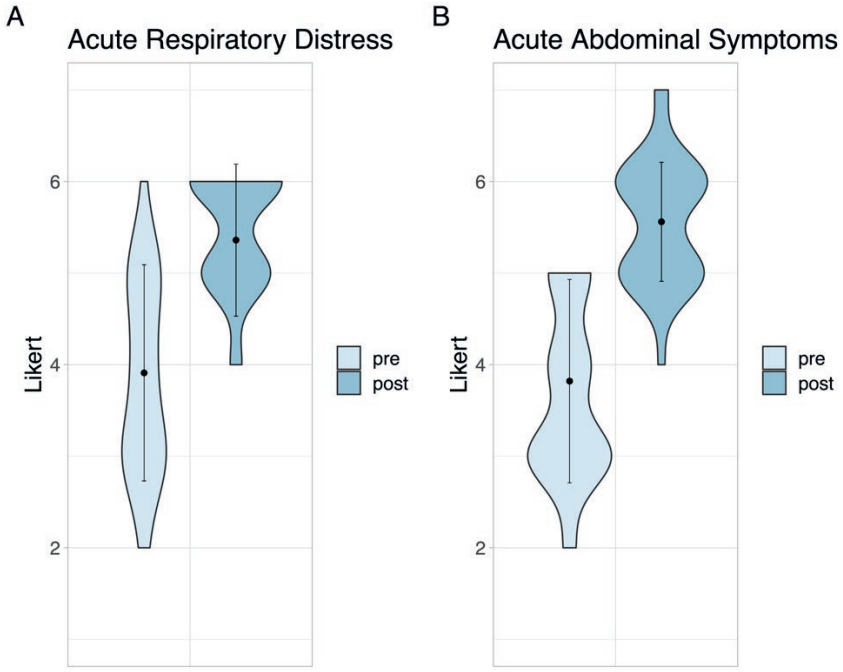

Figure 2: Changes of pharmacy students' self-reported confidence levels pre- and post-teaching segment on 7-point Likert Scales. N = 30.

	Pre-Questionnaire		**Post-Questionnaire**			
Item	**Median (IQR)**	**Mean (SD)**	**Median (IQR)**	**Mean (SD)**	**p-value***	**effect size d†**
How confident do you feel in assessing acute respiratory distress?	4 (2)	3.91 (1.18)	6 (1)	5.36 (0.83)	< .001	.85
How confident do you feel in assessing acute abdominal symptoms?	4 (2)	3.82 (1.11)	6 (1)	5.56 (0.65)	< .001	.87

*Notes: IQR = Inter-quartile range, SD = Standard deviation. *One-sided Wilcoxon signed-rank test to compare the null hypothesis of no differences between pre- and post-evaluation for 30 students who filled in both evaluations. A significant p-value ($p < 0.05$) indicates that there are statistically significant differences on the responses. †Pearson r correlation. Effect sizes may be interpreted as per Cohen (Cohen, 1992) r = 0.10 = weak effect, 0.25 = moderate effect, 0.40 = strong effect. The post-hoc sensitivity power analysis calculated the minimal detectable effect for our matched pre- and post-evaluation pairs to be d = .46 at a power of 80%.*

Table 2: Median and mean changes of pharmacy students' self-reported confidence levels pre- and post-teaching segment on 7-point Likert Scales. N = 30.

For symptoms of respiratory distress, the confidence levels improved from a median of 4 (inter-quartile range: 2) to a median of 6 (1) with a very strong effect size of .85.

The confidence levels for acute abdominal symptoms likewise improved from a median of 4 (2) to a median of 6 (1) with a very strong effect size of .87. The post-hoc sensitivity power analysis calculated the minimal detectable effect for our matched pre- and post-evaluation of 30 pairs to be d = .46 at a power of 80%.

Responses for both items were not statistically different in between students who completed both questionnaires and students who completed only the pre- or post-questionnaires (Mann-Whitney-*U* test, $p > 0.05$, data not shown).

Discussion

In this evaluation of an actor-based training for fifth year pre-registration pharmacy students, statistically significant improvements were observed in immediate self-reported confidence levels for triaging acute respiratory and abdominal symptoms in a fully virtual setting. Students reported feeling comfortable, thinking the simulation to be realistic, and learning about themselves with the feedback they received from the actors.

Feedback, or debriefing, enables students to reflect on their thought and decision-making process as well as on their communication style and the risks of unclear communication and misinterpretations (Crea, 2011). Debriefing is thought to be the most important learning portion of a simulation training (Crea, 2011). In the cohort presented here, students stated that the feedback from the actors was beneficial to learn about their own perceptions of people. Students also dared to try their personal way of asking questions and felt comfortable, showcasing a major benefit of simulation trainings through generating safe training environments. This daring and reflecting on communication within the teaching segment concurrently tackled important communication skills needed for patient-centred pharmaceutical care. Jacob and colleagues addressed an unfavourable pharmacist's communication style (technical jargon, feeble responses to emotional prompts, controlling the interaction and content by using close-ended questions) by using actors for a forum theatre with re-enacted pharmacist-patient consultations as well (Jacob et al., 2019). Similarly, their actors used improvisational techniques and role-playing to generate non-scripted dialogues to increase the students' communication and, ultimately, patient-care skills. This teaching approach was likewise well received by the students, again praising instantly received feedback. Generally, the use of actors and the possibility to leave the simulation for a short time with a "time out" has already been used in medical training. To practise interactions with adolescents, Hardoff and Schonmann trained students at a high school drama class (Hardoff & Schonmann, 2001). As in our training session, family physicians, paediatricians and gynaecologists then had the opportunity to practice in front of their peers, with the option to leave the simulation at any time. Here, too, learning successes were achieved through creative thinking and active learning, even among the young actors. Hardhoff and Schonmann were also able to show, however, that it is associated with reluctance and shame when individual participants must expose themselves in front of an audience of their colleagues. We also received one open-ended comment with the course feedback that noted this circumstance. This puts personal comfort in such an interactive seminar at odds with staffing possibilities, as group sizes would have to be reduced.

Active learning, which was at the centre of our case simulation, "engages students in the process of learning through activities and/or discussion in class, as opposed to passively listening to an expert; it emphasizes higher-order thinking and often involves group work." (Bonwell & Eison, 1991; Freeman et al., 2014) A meta-analysis on 225 studies investigated the effect of active teaching on student performance (Freeman et al., 2014). Active learning, varying from clicker questions and group problem-solving to workshop course designs, positively influenced student performance on examinations and reduced failure rates. Our simulations equally had positive effects on self-reported confidence levels. These findings are consistent with results from Tofil and colleagues, who similarly simulated a scenario of acute respiratory distress with a mannequin for pharmacy students, requiring the administration of albuterol to an infant (Tofil et al., 2010). Their training was shown to improve the students' abilities to formulate a pharmacy care plan in conjunction with other health professionals or caregivers with the greatest effect on the application of knowledge. Tofil and colleagues reported on high retention rates of this knowledge, although only anecdotally through later conversations with their students. Likewise, Rushworth and colleagues from the Highland Pharmacy Education & Research Centre recently successfully used simulation trainings, of which some included mannequins, to develop confidence and competence in clinical assessment, management, prescribing, and consultation skills in advanced general practice clinical pharmacists (Rushworth et al., 2021). Their scenarios ranged from long-term conditions (e.g., chronic pain) to acute presentations (e.g., symptomatic uncontrolled diabetes) and new presentation of atrial fibrillation. Although not evaluated statistically, Rushworth's simulation trainings also promoted improvements in self-reported confidence and competence in pre- to post questionnaires. In 2019, Deslauriers and colleagues published their study on Harvard University (Cambridge, Massachusetts) physics students' self-reported perception of learning when engaged with an active teaching style (Deslauriers et al., 2019). Compared to a traditional, passive lecture, the students in the active teaching group enjoyed the lecture less, felt that they had learned less, and evaluated the teacher as being less effective in teaching, but later achieved better test results. These results impressively showed a disconnection between the students' experience of learning and their actual learning. It is, hence, important that students are being prepared for teaching elements where they must actively contribute to pre-emptively address any misperceptions on its learning effectiveness. It was recommended that instructors explicitly present the value of increased cognitive efforts to their students to address this disconnection and misperception. This practice would simultaneously address a major barrier for active teaching styles, which is instructors who use an active teaching style receiving poorer evaluations than their traditional peers, despite following evidence on learning (Deslauriers et al., 2019).

Limitations

Limitations of this teaching segment evaluation mainly include its data collection. Student self-reported learning effects right after the lessons are reported. Student self-assessment reflects the students' confidence levels, not their competency. The students' ability to correctly perform an examination of a patient with acute respiratory distress or acute abdominal symptoms were not tested. Appropriately triaging such patient cases are only assessed later in objective structured clinical examinations (OSCEs) as part of the federal exams to become registered pharmacists. Asking the students right after the lessons may have resulted in overly positive answers, disregarding retention rates. In addition, our teaching evaluation consisted of only 30

students, resulting in a response rate of 61%. This limits the overall generalisability of our results. However, our post-hoc sensitivity analysis showed that even with such a small sample, the effects were large enough for conclusive statements on the effectiveness.

Impact

The restrictions on physically present higher education because of the SARS-CoV-2 pandemic posed challenges for teaching segments, especially the ones promoting active learning. These challenges, however, also presented opportunities to introduce and evaluate new approaches to teaching and learning. This teaching evaluation presents evidence for active teaching segments using re-enacted medical scenarios for pharmacy students, even in a virtual setting using video conferencing software. Working with actors instead of patients enabled a greater variety of clinical pictures coupled with more acute portrayal and easier scheduling, and students could practise in a more disinhibited way with different personalities of pharmacy clients. Additionally, this evidence generates thoughts on keeping some of the elements: Swiss pre-registration pharmacy students are placed in pharmacies scattered throughout the country and could benefit from distanced learning instead of having to travel to the university campus.

The fact that our students felt more confident in triage of acute symptoms after the training sessions is also important for the future of the pharmacy profession in Switzerland. The new tasks in primary care with expanded dispensing competencies require pharmacists to not only make the right medical decisions, but also dare to actively suggest billable pharmaceutical services in customer contact. In this sense, trainings such as those presented here prepare students for the Swiss pharmacy profession of tomorrow.

However, we also encourage a broader application of similar educational activities outside the pharmacy and medical professions, as the training with later customers can be applied in education to any later profession and filled with subject-specific content. Actor-based training addresses important transferable competencies according to the ETH Competence Framework (ETH Zurich, 2022). In addition to the subject-specific competencies, our acting simulation training also targeted the three other domains, method-specific, social, and personal: our students had to demonstrate (1) the ability to gather information, which then influenced decision-making and problem-solving (method-specific); (2) the ability to articulate thoughts and ideas (in lay language) and to adjust their effective communication to different contexts, whilst simultaneously having a strong, yet negotiating customer orientation with empathy (social); (3) the ability to adapt, think creatively and critically, taking on responsibility, and being self-aware and reflective (personal). We are convinced that actor-based training that promotes such a diversity of competencies should not be limited to medical and pharmaceutical study programmes.

Conclusion

The SARS-CoV-2 pandemic years of 2020 and 2021 forced universities and higher education to shift from physically present teaching and training towards virtual formats. Besides personal challenges for educators and students alike, this shift also entailed the danger of not being able to pass on important interpersonal, transferable skills to certain pharmacy student cohorts. Especially for triage, where the application of

theoretical knowledge must be practised, there was a danger that the pre-registration students could not be given the same competence and the necessary self-confidence. This teaching evaluation showed the value of actor-based training, that self-confidence in triaging can also be successfully promoted virtually, and that different communication styles and dealing with different personalities can be integrated into other teaching elements.

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Appendix: Supplementary Data

In general, great praise to the actors, who have been very convincing in every lecture so far! You could almost feel the pain ;)
That was highly realistic! They were really very good!
Very good! Extremely fun and you learn a lot. Actors are extremely realistic.
it was very interesting
Keep it up. It is difficult for everyone, but Dr Gutzeit makes the best of it.
The confrontation is stronger. Patients are already familiar with their situation and are unlikely to be as direct because they have not been given new information. Actors can bring in character traits or moods more distinctly and alternate more easily.
It gives you the opportunity to ask questions or make assumptions that you don't feel quite sure about, and you get feedback directly. I find it a very good way to learn practical knowledge without having to be in direct "real" customer contact like in a pharmacy.
They gave a lot of input and acted very realistically. There were also different personality types.
Because it's not a real situation, you can also pause the situation, think about it and also do something wrong without consequences. It takes a little bit of the pressure off, which I liked.
Very realistic, possibility to solve special and unusual situations under the supervision of experts
They acted out the situation very well, very believably.
The fact that, like in the example, they also played somewhat "more difficult" customers, e.g. they didn't want to answer everything directly. It was played very convincingly.
Relation to reality (almost like real)
They are very real situations and I find the doctors' explanations very helpful for the concrete decision or action -> gives me security!
I think it's very good how they also work pictorially. Posture and coughing are shown very well. In general, I think it makes sense to learn in this way because the OSCE exam in September is also a role play in principle.
They played super again and especially Sven was not the easiest patient, he was very demanding and always wanted a solution immediately. When we practise with such patients, we are certainly well prepared. The cases were well chosen and exciting. Again, we learned a lot and the specialist perspective of the two guest doctors was very helpful.
The actors could also play a "more difficult" patient at times, which makes everything a bit more realistic. Usually not every client has so much patience or is open to reveal everything immediately.
The actors played very well and believably. They sometimes dodged our questions, which also happens in the pharmacy and was therefore realistic. I thought the case studies were good because they were not rare "special cases", but could also occur in this way in the pharmacy.
Very accurate portrayal of the symptoms, played believably.

It was a very informative day with very dedicated lecturers/organisers, thank you very much!
The actors offer a good middle ground between text and real patients. They try very hard and also take on sometimes difficult client characters
I think it makes sense to practise with actors, because actors can act out a "real" situation and perhaps prepare you more for an emergency situation.
Actors are very authentic

Supplementary Table 1: Translated open-ended comments from students as part of the course feedback to the question "What did you like about training with actors today?".

Nothing! Some things might have been better to watch in person but because of COVID it was not possible. The actors were just great!
Maybe (if someone then dares) it makes sense if only one student works with the actor. It struck me that no meaningful sequence happens during the questioning because other students keep asking different questions.
There was a lack of direct interaction. Difficult coordination with the other students. You don't want to interrupt each other.
It was more due to the online execution: you can't interact with the patient as you would like, you interrupt each other, connection problems, etc. I would definitely do it live as soon as it is possible again, important aspects are still lost through zoom. But the actors did a great job.
Nothing ;)
Personal contact would be nicer, but that's not because of the actors.
I found it difficult to interact with the actors in front of everyone, because in everyday life you are often more 1 to 1 with the client.
The situation was not so realistic in that you could not really build up a relationship with the patients. The interpersonal aspect is extremely important in such situations (perhaps a hand on the shoulder, sitting the patient on a chair and kneeling to him, which immediately creates a more confidential atmosphere) and was unfortunately lost via Zoom. Also, when you look after a patient as a group, it quickly comes across as questioning instead of a conversation from one person to another. But we can practise that in the pharmacy.
It's a bit more difficult about Zoom with non-verbal communication.
Direct contact on site would make the situation seem even more real and you could additionally use body language to calm the "patients". Online there are sometimes pauses where you don't know who of the students is supposed to say what and then suddenly several people speak again at the same time.
Rather unrealistic that such acute cases occur in the pharmacy, perhaps take a case in which rather inconspicuous symptoms occur but something serious is behind it.
The question rounds seem rather forced in most cases, especially when after 3-4 questions all the alarm bells ring and you would send the patient to hospital immediately. Personally, I would find it exciting if the actors came back with a

discharge prescription after a triage and reacted to our short assessment. Unfortunately, I don't know how feasible that would be.
Actors are perhaps a bit exaggerated, and help you arrive at the right result, which is not the case in everyday life.

Supplementary Table 2: Translated open-ended comments from students as part of the course feedback to the question "What did you not like today in your contact with the actors?".