14 Cologne Communication Curriculum
Integration of Medical Disciplines

Christian Albus, Laura L. Kilarski, Armin Koerfer, Christoph Stosch

> Although clinical communication teaching has become increasingly accepted as a formal component of the medical curriculum, there is still a problem to be faced. Communication still often appears in medical education to be a peripheral element rather than a mainstream activity truly perceived by schools and learners as central to all clinical interactions.
>
> Jonathan Silverman 2009: 361

Abstract: While the general structure and didactic concepts of communication teaching and examination at the Cologne Department of Psychosomatics and Psychotherapy were described above (§ 13), the following section provides an overview of the entire *Cologne Communication Curriculum* (CCC) and the subject-specific courses in detail (§ 14.1). This overview extends into a *longitudinal* curriculum from the first semester tutorial to specific lectures and theoretical as well as practical courses in the preclinical and clinical phases through to the so-called "practical year" (comparable to foundation year 1). Various subjects are involved in *interdisciplinary* cooperation in the communication training of students in both the pre-clinical and clinical training phases (including medical sociology, psychosomatic medicine, internal medicine, psychiatry, general medicine, palliative medicine, pharmacology, medical ethics) (§ 14.1.2). The subject-specific contributions to communication training are coordinated in the competence-oriented, longitudinal and interdisciplinary *Cologne Communication Curriculum* (CCC) under the direction of the Cologne Interprofessional Skills Lab and Simulation Center (KISS). The CCC focuses on teaching *clinical* and *communication* skills that are alternately related to each other in a *spiral curriculum* (§ 14.1.3) and are gradually developed further in ever higher learning levels over the course of the degree.

The foundations for *biopsychosocial* interviewing are already laid in the first semester tutorial, carried out by the Department of Psychosomatics and Psychotherapy, and are then gradually expanded on in preclinical training through interdisciplinary lectures and courses in general medicine and medical sociology (§ 14.2). In clinical training, medical interviewing is then taught in theory and in practice with real or simulated patients (SP), with a thematic focus on the various subjects (§ 14.3). The communication skills for taking a medical history initially acquired in the clinical courses based on theory, reflection and training in practice interviews are then expanded and deepened to include psychodiagnostic and psychotherapeutic aspects of medical interviewing

(psychological comorbidity, coping, adherence, defensiveness, etc.). Finally, students are prepared for the *practical year* (§ 14.3.11) in the STArT block by going through various stations, during which they reflect on and practise communication skills based on selected practical cases with simulated patients.

We address training opportunities for medical communication within our faculty separately (§ 16, 43), as well as the qualifications of our tutors and lecturers, who are ultimately responsible for communication training ("teach the teachers"). The training of simulation patients at our clinic as well as in the Dean's Office for Student Affairs and the faculty as a whole is covered in another section of the handbook (§ 13.6, 41).

14.1 Development of the Cologne curriculum

Since the mid-1990s, much effort has been made at Cologne University Hospital to reform medical education, driven by student representatives, the Dean of Studies and various disciplines, in psychosomatics under the leadership of the long-standing specialist representative Karl Köhle. In a working group on *medical didactics*, reform approaches were discussed and implemented from the teaching and learning perspective of subjects as diverse as anatomy, physiology, pharmacology, psychosomatics, orthopaedics and so on. The systematic teaching of basic techniques to students in a "triple jump" (core examination course (§ 14.2.5), rotation examination course (14.3.5) and anamnesis course (14.3.1)) started with an initiative developed by student representatives during the student strike in Cologne in 1992/93 and was subsequently implemented in Cologne together with subject representatives under the leadership and mediation of the first Dean of Studies of the Faculty of Medicine, Jürgen Koebke. A milestone in the development of the Cologne training reform was the presentation of interim results, which were put up for discussion at the symposium on "Medical Training 2000" (Stosch et al. 2000), which took place in Cologne in spring 2000.

During this period, numerous interdisciplinary cooperation projects were initiated, and their transferability across disciplines was tested. What may, in hindsight, have initially appeared as "stand-alone courses" (Silverman 2009) or "isolated solutions" (Sator, Jünger 2015) soon evolved into an *integrative*, *longitudinal* and *interdisciplinary* communication curriculum at the Faculty of Medicine at the University of Co-

logne, especially with the introduction of the model degree program in human medicine (Zims et al. 2019) in the winter semester of 2003/2004.

14.1.1 Training reform and communication curriculum

The various reform approaches were initially tested and evaluated within the individual, subject-specific degree courses before being expanded through interdisciplinary cooperation projects. These provided a broader foundation on which transfer services were used for the development of the *Cologne Communication Curriculum* (CCC).

Interdisciplinary cooperation projects in research and teaching

Initially, the approaches of *problem-oriented learning* (POL) (§ 13.4) were central, which gained international recognition and were first implemented in individual subjects in Cologne (e.g. pharmacology, psychosomatics) and critically reflected upon and further developed through accompanying research (Antepohl, Herzig 1999, Herzig et al. 2003, Köhle et al. 1999, 2003, Obliers et al. 2000, 2002, Koerfer et al. 2008). Over time, problem-based learning, as it was adapted for medical communication training (§ 13.4.2), has become well-established across disciplines.

In addition, interdisciplinary cooperation projects were set up between individual subjects in Cologne, such as between teaching in anatomy and psychosomatics, which investigated the connection between facial expression and facial musculature in terms of *non-verbal communication* (Köhle et al. 2003). A joint research and teaching project on the *psychophysiology* of students' *exam anxiety* was also carried out between psychosomatics and physiology (Köhle et al. 2003). In a cooperation project between surgery and psychosomatics, multimedia programs were developed to educate surgical patients, allowing patients to proactively learn about their conditions and upcoming procedures in addition to the medical consultation (Eggers et al. 2007, Bollschweiler et al. 2008). The concepts and results from this cooperation are discussed in the relevant chapter on multimedia communication with surgical patients in this handbook (§ 39).

Other collaborative projects emerged between pharmacology and psychosomatics, for example (e.g.) on the question "When is a doctor a

good doctor?" (Herzig et al. 2006), in which *scientific-reflective* and *communicative-empathic* competencies proved to be key competencies (§ 6) in addition to *professional-clinical* competencies.

A further interdisciplinary collaboration between these disciplines related to the complex topic of "endpoint-relevant effects through participatory decision-making" (Hauser et al. 2015), which we have already discussed (§ 10). A specific cooperation arose on the topic of *(non-)adherence* (§ 10.1), which focused on medication adherence (Albus, Matthes 2014, Hauser et al. 2017). The ongoing collaboration between pharmacology and psychosomatics in a joint research and teaching project on *prescription discussions* has also been directly incorporated into a thematic chapter (§ 26) of this handbook.

There is a long-standing interdisciplinary cooperation in the preparatory course for the practical year (§ 14.3.11), which is carried out under the direction of the Cologne Interprofessional Skills Lab and Simulation Center (KISS) in cooperation with various disciplines (pharmacology, psychosomatics, palliative medicine, medical ethics, etc.).

Research, teaching and evaluation of communicative competencies

As already mentioned above (§ 2, 3, 13), the research, teaching and evaluation of communicative skills has been a focus of the Cologne Department of Psychosomatics and Psychotherapy since the early 1990s (e.g. Köhle et al. 1995, 1996, 2001, 2003, Koerfer et al. 1994, 1996, 2000, 2004, 2005, 2008, 2010, Koerfer, Albus 2015, Köhle, Koerfer 2017). Taking the results of this research into account, a *manual* on interviewing was developed for teaching (Köhle et al. 1998), which has been revised in several editions (most recently in 2022) and serves as the basis for communication training (§ 3.4, 13.4.1, 17-23). A multimedia learning program was also developed (Koerfer et al. 1999), which was also made available to other subjects and universities (§ 13.4.5). For concrete teaching practice, a large pool of empirical doctor-patient discussions (videos) is available, which are used in lessons for a *comparative* learning approach in which more or less successful examples of communication can be critically compared (§ 13.4.4) in order to be able to orientate oneself on *best practice examples*.

The practice-oriented reform efforts in teaching corresponded to the efforts towards a practice-oriented examination, as established with the OSCE method, in which simulated patients (SP) are primarily used (§

13.6, 41) (Koerfer et al. 2000, 2008). In Cologne, SP were already used in the winter semester 1999/2000, initially to test communicative skills, but later also in other teaching areas (§ 13.5.4). Since only what had previously been taught should be tested, a Cologne Evaluation of Medical Communication (C-EMC) was used in the OSCE examinations, which was developed analogously to the manual (C-MMC) (§ 13.6) and is now also used in other subjects and universities (e.g. Petersen et al. 2005, Henningsen et al. 2006, Schröder 2010, 2019, Mortsiefer et al. 2014) (Koerfer et al. 2000, 2008, Albus 2022) (cf. § 17). The OSCE method with the use of SP is now an established procedure (§ 41), which is used in teaching and examinations across all disciplines in Cologne, e.g. from the first semester tutorial (§ 14.2.1) to practical courses (§ 13.5.4, 14.3.8) and the "PY-STArT block" (§ 14.3.11), which prepares students for the practical year.

Although the Department of Psychosomatics, which considers the promotion of communication skills to be one of its core duties, has a focus on communication training, students can now benefit from curricular development and networking with other subjects at Cologne University Hospital, in which shaping the *relationship* and *communication* between doctor and patient is an essential part of their research and teaching. Before the subject-specific contributions to the *Cologne Communication Curriculum* (CCC) are explained in detail (§ 14.2.-4), an overview of the requirements and structure of the curriculum should be given first.

Competence-oriented, longitudinal and interdisciplinary curriculum

Under the direction and coordination of the Office of the Dean of Studies, a *competence-oriented, longitudinal* and *interdisciplinary* communication curriculum has been developed at the Faculty of Medicine in Cologne since the end of the 1990s, which ranges from the first semester tutorial to the practical year with the participation of various subjects (Table 14.1). The Cologne Communication Curriculum is

- *competence-oriented*
  because the teaching concept aims to teach and develop students' various cognitive, motivational and social abilities, skills and dispositions, which they should be able to use to solve situa-

tion-specific problems (Weinert 2002; 27f) (§ 3.1) (NKLM 2.0, 2021) (BMBF 2017, cf. handbook foreword). The development of *communication skills* is central, although these must be taught on an ongoing basis with *clinical* (specialist) skills (§ 1, 3, 6, 17-23).

- *longitudinal*
  because it extends over the entire course of study, in which the foundations for biopsychosocial communication are already laid down in the first semester tutorial (§ 14.2.1), which is then gradually expanded and deepened both theoretically and practically in pre-clinical and clinical communication training. Characteristic is the early and continuous promotion of communicative skills, as also emphasized in the Master Plan 2020 (BMBF 2017) (see handbook foreword).
- *interdisciplinary*
  because the pre-clinical and clinical subjects, for which medical communication is a central component of interdisciplinary research and teaching, make their specific contribution to the development of communicative competence based on their *subject-specific* responsibility and expertise. This applies, for example, to the theoretical foundation of the doctor-patient relationship as a transference relationship as well as the practical teaching of empathic competence in dealing with patients' emotions (*fears, grief, anger*) (§ 3, 20) or specific motivational problems and forms of defence (denial), etc., which can make adherence (§ 10, 26, 29) more difficult.

As already explained in the chapter on the conception of *medical communication didactics* (§ 13), such a competence-oriented, longitudinal and interdisciplinary curriculum can only be structured as an *integrative spiral curriculum* in which recurring subject areas and the knowledge, action and communication skills acquired here are expanded and deepened on in higher learning levels. Students go through phases of theory, reflection, training and evaluation, each with subject- and disease-specific learning objectives and practical cases. Before we return to these circular learning processes (§ 14.1.3), we will first provide a tabular overview of the *Cologne Communication Curriculum* (CCC) as a whole, as it appears in the course structure of medical training for students (Table 14.1). This is followed by a brief description of the indi-

vidual courses, which are then described in more detail (§ 14.2-4) in terms of their topics, didactic-methodological concepts and learning objectives.

14.1.2 Communication training at a glance

Table 14.1 provides a chronological overview of the courses in the various disciplines that contribute to the communication education of students at Cologne University Hospital based on their specific responsibilities and expertise. We follow the traditional division into preclinical and clinical courses, which also applies to communication training.

Semester	TE	Subject/type of course	Contents - Learning objectives	Didactics Methodology	Examination
Preclinical training					
1	12	Psychosomatics first semester tutorial	Biopsychosocial Medicine, DPC DPR	TH RE TR VC RPL SP POL	Text exam
1	24+18	Medical sociology	e.g. DPC DPR	TH RE POL	MC exam
2	3	General medicine	DPC DPR SDM	VC RE MM	MC exam
3	4	General medicine	DPC, SDM, motivational interviewing	RE RPL MM	EV, MC exam
1 - 4	1 each	Interdisciplinary areas of expertise, e.g. diabetes, death and bereavement, etc.	Clinical picture, therapy, coping, behaviour modification, DPC DPR	Lecture MM VC	e.g. text exam, MC exam, TP
4	3	General medicine	DPC, diversity-sensitive communication	TH RE MM	MC exam
4	6	Core examination course	physical examination, DPC	TH RP RPL	EV, OSCE

Tab. 14.1a: Cologne Curriculum Communication - Preclinical (overview; see legend below)

Se-mester	TU	Subject/type of course	Contents - Learning objectives	Didactics Methodology	Exami-nation
Clinical training					
5	12	Psychosomatics internship medical communication	DPC, DPR, BPS Taking medical history, interview techniques	TH TR EV SP POL RP MG1 VC	OSCE, C-EMC PDT
5-10	1 each	Interdisciplinary areas of expertise, e.g. CHD, heart failure, ad-herence	Clinical picture, thera-py, DPC, DPR	Lecture MM VC	e.g. text exam, MC ex-am, TP
5	2	Core examination course, psychiatry	Clinical diagnostics DPC, DPR	TH SP	EV
5+9	9	Internal medicine BI	Physical examination, DPC	TH RE POL RP	OSCE
6	2	Medical ethics course	DPR	TH	SC exam
6	6	Pharmacology ES	Prescription discus-sion, SDM, DPC, DPR	TH POL SP VC	EV
7	3	General medicine	DPC, climate-sensitive consulting	TH RE MM	MC exam
7	5	Palliative medicine Field of expertise	Change of therapy goal, DPR DPC BBN SDM	TH RP SP RE POL	EV
8	12	Psychosomatics lecture	Clinical images, thera-py, DPC DPR	Lecture MM VC	MC exam
8	24	Psychosomatics BI	Psychodiagnostics, BBN DPC DPR	TH RE VC TR EV POL RP SP	-
8	8	Psychosomatics WS	BBN, DPC in oncology	TH RE POL MG2 VC	-
8	2	Human genetics Seminar	DPC, lay language	TH RPL	SC exam
8	18	Psychiatry BI	psychopathological findings, DPC DPR	TH RE POL TR RP SP	SC exam
8 - 9	100	General medicine BI	DPC DPR BBN SDM, anamnesis survey	TH RE TR RP	EV
9/10	10	Gynaecology BI	DPC, medical history	TH SP EV	OSCE
10	2	Medicine of ageing BI	DPC, age-related self-awareness	RPL	Exam
10	24	Interdisciplinary PY-STArT block	ward round communi-cation, DPC for diabe-tes, depression, BBN, SPIKES, NURSE etc.	TH RE POL TR SP EV	EV

Tab. 14.1b: Cologne Curriculum Communication - Clinic (overview; see legend below)

Legend (Tab. 14.1)

TU	Teaching units	BPS	Biopsychosocial
ES	Elective seminar	DPC	Doctor-patient communication
POL	Problem-oriented learning	DPR	Doctor-patient relationship
TH	Theory (research)		
RE	Reflection (of cases/videos)	MG1	Manual for general conversation management
TR	Training for APK	MG2	Manual for diagnostic reporting
EV	Evaluation/feedback	BBN	Breaking Bad News
RP	Real patients	SDM	Shared decision making
RPL	Role play	OSCE	Objective Structured Clinical Examination
SP	Simulation patients	PDT	PatDocTalk (multimedia program)
VC	Video conference	C-EMC	Cologne Evaluation Manual Communication, see Appendix § 44.2
MM	Multimedia	SC	Single Choice
MC	Multiple Choice	BI	Block internship
TP	Term paper	PY	Practical Year

14.1.3 Spiral Curriculum Communication

Even a brief comparison between the different courses reveals a certain overlap of topics and learning objectives. However, the *reintroduction* of certain topics (*empathy*, *coping*, *adherence, defence*, etc.) is by no means to be seen as mere redundancy, but rather considers the didactic requirements of biopsychosocial medicine and interviewing (§ 4), for which the foundations are already laid in the first semester tutorial (§ 14.2.1).

As explained above (§ 13.3), the reintroduction of exemplary topics and tasks in a spiral *curriculum* serves the needs and possibilities of expanding and deepening specific *clinical* and *communicative* competencies of learners at their respective learning level (Murrhardter Kreis 1995, Kurtz et al. 1998, Harden, Stamper 1999, Koerfer et al. 2008, Fragstein et al. 2008, Silverman 2009, Venktaramana et al. 2022). In such an integrative spiral curriculum (Fig. 14.1), the knowledge, action and communication skills already acquired are alternately developed and tested in ever new learning situations with new clinical and communicative challenges.

For example, this increase in learning at increasingly higher learning levels can be achieved with a constant topic (e.g. *defence: denial*) on the same clinical picture (*diabetes*) or with a transfer performance on other clinical pictures (*myocardial infarction*), first theoretically and then practically in discussions with real patients or SP who *deny* a serious illness and behave *non-adherently* as a result.

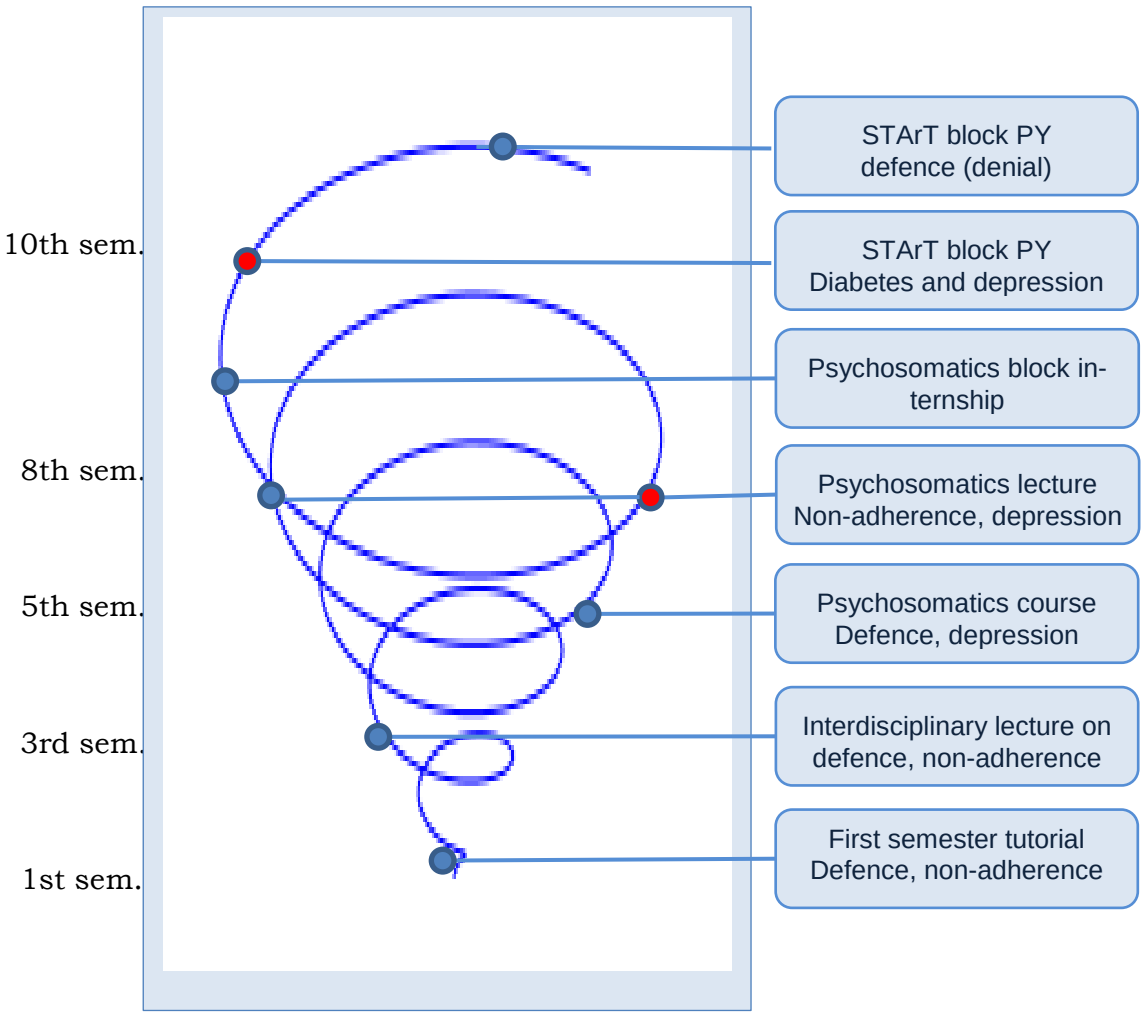

Fig. 14.1: Exemplary spiral curriculum communication (selection) in cases of *defensive behaviour* (denial) and *non-adherence* in a serious disease (e.g. *diabetes mellitus*) as well as additional *psychological comorbidity* (e.g. depression) (blue-red dots).

The learning process can take place in an integrative spiral curriculum over several pre-clinical and clinical semesters with the interdisciplinary involvement of various subjects, which can only be considered here as examples (Fig. 14.1).can be further differentiated and illustrated in clinical training using specific medical conditions (e.g., diabetes mellitus,

myocardial infarction) What has already been addressed as a topic of research and teaching in medical *psychology* or *sociology* as *maladaptive* patient behaviour, can be further differentiated and illustrated in clinical training using specific medical conditions (e.g. diabetes mellitus, myocardial infarction). *diabetes mellitus*, *myocardial infarction*) (§ 29) (Kruse et al. 2006, Kruse 2017, Albus, Herrmann-Lingen 2017, Albus, Köhle 2017, Albus et al. 2019, Albus, Petrak 2021, Kulzer et al. 2023, Herrmann-Lingen et al. (eds.) 2022). The communicative handling of *denial* (of an illness), which can be self-damaging, represents a further deepening of the topic. Addressing this issue can simultaneously be a challenge in conversations, e.g. with a suitably trained simulation patient.

At the same time, the connection with psychological co-morbidity (*depression)* can be repeatedly addressed in teaching, for example using the same illness (*diabetes*), which results in a further *psychodiagnostic* task in conducting the interview (§ 30). It is precisely this conversational task that arises in the preparatory course for the practical year (STArT block) (§ 14.3.11), in which the students are asked to conduct a conversation with a depressed patient (SP) with diabetes (Fig. 14.1, 10th semester: blue-red dot), who lacks appropriate self-care, as can be seen from the patient's "poorly controlled diabetes".

Here, knowledge and communication skills can interact synergistically: the understanding of (reasons for) possible non-adherence, which has already been acquired in pre-clinical subjects (medical *psychology*, medical *sociology*) and expanded and deepened in clinical lectures and practical courses with patient contact, sharpens the observation of *non-verbal* and *verbal* communication with the patient. In turn, perceiving the person during the conversation forms the basis for continuing the medical conversation in a certain direction, in which the possible co-morbidity (*depression*) (§ 30), e.g. in this patient (SP) with diabetes, is adequately clarified with a corresponding medical *adaptability* (§ 3, 17) through *active listening* (§ 19) and *detailed questions* (§ 21) (Kulzer et al. 2023, Kruse et al. 2006, 2017, Albus, Petrak 2021). Even if psychotherapy for depression (Niecke, Albus 2011) often exceeds the possibilities of clinical or GP primary care, the *psychodiagnostic* skills should be developed to such an extent that depressive co-morbidity is not "overlooked" e.g. in the case of diabetes treatment, but is recognised in conversation and adequately explored through further detailed questions about symptoms (§ 30).

The independent identification and recognition of medically relevant topics and their active further processing in conversations with patients represents a special variant of *problem-oriented learning* (POL), as described above (§ 13.4.2). Independent problem recognition is then the first prerequisite for active problem solving when talking to so-called "difficult" patients, who, for example, are often not readily willing to follow the doctor's "regime" (§ 26, 34). It proves necessary for students to have repeatedly acquired and deepened theoretical knowledge and at the same time gained practical interview experience on similar or related topics precisely in these problematic cases of the doctor-patient relationship and communication, which can often develop into persistent non-adherence with serious consequences for the individual health of patients and the healthcare system as a whole (§ 10.1) (Albus, Matthes 2014, Matthes, Albus 2014, Koerfer, Albus 2015).

With appropriate *transfer skills,* students are then adequately prepared for a complex communication task such as collecting medical information and decision-making (§ 10) with interdisciplinary knowledge and communication skills for specific challenges in communicative interaction with their patients e.g. in order to be able to react appropriately to emotions (*fears, grief, anger*) or forms of defence (*denial*).

14.2 Communication training in the pre-clinical phase

The foundations for communication training are already laid in the first semester tutorial, in which students are introduced to biopsychosocial medicine and communication skills by experienced tutors (§ 14.2.1). The skills acquired there are expanded and deepened in the longitudinal curriculum of general medicine (§ 14.2.2) and in the medical sociology course (§ 14.2.3) in the 2nd/3rd semester. In both subjects' research and teaching, the doctor-patient relationship and medical communication are essential components. In the 1st to 4th semesters, several lectures (§ 14.2.4) differentiate between certain aspects and problems of conducting consultations as they arise in specific fields of competence in specific clinical disease entities (diabetes, myocardial infarction, etc.), in which, e.g., patient *denial* or *non-adherence* can play a major role.

14.2.1 First semester tutorial

In this introductory course, students are introduced to biopsychosocial medicine (§ 4) and familiarized with the problems of biopsychosocial interviewing (with SP) by experienced tutors who have been trained several times by lecturers in psychosomatics and psychotherapy. *Topics, didactic methodology, learning objectives*: Experienced student tutors (peer teaching) will impart knowledge on biopsychosocial medicine (§ 4) and biopsychosocial interviewing in a problem-oriented manner (POL), for which basic communication skills will be promoted using practical cases (videos), role play and practice interviews with SP.

Reference can also be made here to Chapter 4 (§ 4, "Biopsychosocial medicine"), where, in addition to the epistemological foundations, the well-known case study by v. Uexküll, Wesiack (1991, 2011) on the obese patient is also dealt with from the aspect of biopsychosocial interviewing.

14.2.2 General medicine

Since the founding of the Institute of General Practice at the Faculty of Medicine at the University of Cologne in 2022, general medicine teaching has been fundamentally revised. The StudiPat (study-accompanying patient care) program was replaced by the "Longitudinal General Medicine Module" (LoMA). With the LoMA, general practice accompanies students through their studies from the first to the ninth semester. Communication is taught at many points in the module.

The relevance of establishing a long-term doctor-patient relationship in general practice is discussed as early as the second semester. Following on from this, concepts such as the experienced anamnesis, the wait-and-see approach and shared decision making are dealt with, in which students learn how important open communication is both in the anamnesis and in joint decision-making and safe treatment planning.

The LoMA also includes focus topics on "Motivational interviewing", "Diversity sensitivity" and "Climate change & health", which focus on communication in GP consultations. In the 3rd semester, students learn how to conduct "motivational interviewing" as part of a GP lifestyle consultation. Various communication techniques, such as active and reflective listening, appreciation and asking open questions, are discussed and practised in small groups. The course also teaches what

should be considered when communicating sensitive topics such as lifestyle, weight, alcohol consumption, etc.

In the 4th semester, students develop content on diversity-sensitive communication with patients, colleagues and relatives in an eLearning unit. One focus is on the topic of racism in medicine, which is why students formulate their own written communication strategies for dealing with racism as the final task of the unit.

14.2.3 Medical sociology

In the first pre-clinical semester, the subject block "Medical Sociology" takes place, consisting of a total of 28 units of lectures and 24 units of seminars. The lectures deal with basic medical-sociological theories and topics for understanding social determinants of health and illness as well as social influences on healthcare.

An important part of the theoretical knowledge taught there deals with the topic of doctor-patient relationships and communication. The content is intended to lay the cognitive foundations for understanding everyday profession-specific communication and to provide students with the most important theoretical models. Initially, aspects such as verbal, non-verbal and para-linguistic communication channels should be described (cf. § 12, 18). The models according to Schulz von Thun and Watzlawick (cf. § 7.4) as well as Freud's iceberg model are taught as a basis. The asymmetry of the doctor-patient relationship should then be understood and described. During this, divergences in the language code between patients and doctors should be explained, among other things. For a basic understanding of this asymmetry, the social roles of doctors and patients should also be defined.

Furthermore, students should be able to explain and differentiate between the relationship models of paternalism, the informed choice model, participatory decision-making and consumerism (cf. § 10). Aspects to be considered in doctor-patient communication are described, such as disruptive factors for successful communication, communication with vulnerable patient groups, the influence of social inequalities on communication and treatment as well as recommendations for breaking bad news.

In addition to the above-mentioned points, the theoretical and empirical effects of patient-centered communication on patient outcomes should be described. Furthermore, the term health literacy should be defined, described and its significance in conversations with patients should be identified.

At the end of the course, the cognitive learning objectives are assessed by means of a multiple-choice exam. In the accompanying small group seminars, students learn initial skills in scientific work. The students go through the research process of a medical sociological study from the development of the research question to answering it by means of their own initial data collection using empirical social research methods. The results are displayed in poster presentations. The choice of research questions to be investigated is based closely on the medical sociology lecture topics, including topics relating to the doctor-patient relationship.

14.2.4 Interdisciplinary lectures: Fields of competence

In an interdisciplinary series of lectures ("fields of competence") involving various subjects (such as internal medicine, orthopaedics, psychosomatics, etc.), students are introduced to symptom- or context-specific problem areas (e.g. diabetes, back pain, myocardial infarction, death and grief) from the 1st to the 10th semester.) Depending on the field of competence, specific skills on certain clinical pictures (e.g. myocardial infarction) are to be taught, which also include the competent handling of emotions (*fear, grief*) and defence (*denial*) (1 unit each).

14.2.5 Core examination course

In the general examination course (core examination course) in the 4th semester, students gain their first experience in a medical role under the supervision of a doctor in a combined skills training course and in a clinical environment. In addition to the practical skills taught here (basic techniques of physical examination), the communication aspect plays an important role: students learn to combine a patient interview with a physical examination and to apply the practical and theoretical content they have learned so far. With regard to doctor-patient communication, the focus is therefore on the skills and abilities required for conducting a subject-specific medical history and assessing the relevant status "efficiently, problem-oriented, correctly and in a manner considerate towards the patient" (§ 2, section 3 of the study regulations).

The role model of the teacher and the reflection of one's own experience as a patient and in the role of a doctor facilitate the learning experience in terms of methodology and didactics. Examination skills are

formatively assessed in an Objective Structured Clinical Examination (OSCE) in the following semester (5th semester, OSCE for clinical internship readiness). This learning content is tested again in a summative examination in the 9th semester, the so-called PJ-Reife-OSCE (i.e. readiness for the practical year).

14.3 Communication training in the clinic

Clinical communication training begins in the 5th semester with an internship in medical communication, which is offered by the Department of Psychosomatics and Psychotherapy. During the internship, students have direct contact with simulated patients with whom they conduct an "initial consultation". The skills acquired here are then further differentiated and deepened over several semesters from the specific perspectives of various subjects (psychosomatics, internal medicine, psychiatry, oncology, palliative medicine, medical ethics, etc.), which will be described in detail below. The course to prepare for the practical year ("PY-STArT block") is presented separately below (§ 14.3.11).

14.3.1 Psychosomatics and psychotherapy

In accordance with its teaching focus, the Department of Psychosomatics and Psychotherapy offers a series of courses that build on each other and gradually expand and deepen the communication skills already acquired in the preclinical phase in both theory and practice. The main didactic and methodological concepts have already been presented and discussed in detail above (§ 13), so that we can limit ourselves to a brief description of the individual courses at this point.

Internship "Medical communication"

In the 1st clinical semester (ergo the 5th semester overall), all students receive a practice-oriented introduction to optimal communication techniques in the initial medical consultation, the anamnesis. Simulated patients (SP), who have been specifically trained using numerous suitable role scripts, are used for the practice situation. This gives stu-

dents contact with "patients" with cardiological, surgical, orthopaedic, dermatological, etc. diseases. As we have already described the learning situation and the didactic learning concept in detail above (§ 13.5), only the essential elements and procedural structures of the course will be listed here.

After a theoretical introductory phase, in which our manual on conducting interviews (§ 13.4.1, 17-23) with references to further literature is also taught, the core of the small group work (6-8) is that all students conduct two practice interviews with SPs, if possible, for which they receive no further prior information (about illnesses etc.). They should conduct an "initial interview", as it were, in which the main focus is on taking a medical history.

Following all possible variants of further lesson design is an evaluation phase (§ 13.5.3). At the end of the medical interview, the students who have taken on the role of the doctor are given the first opportunity for critical self-reflection on how they experienced themselves, their patient and the interview itself. This is followed by spontaneous feedback from the group, whose members may have previously been given special observation tasks by the lecturer (e.g. according to the manual). Individual learning objectives are formulated for individual participants via the joint feedback, such as

- More listener signals, but less often "okay"
- Fewer "interruptions"
- More "eye contact" instead of taking notes
- More empathetic feedback
- Fewer or no leading information questions, etc.

In addition, work tasks are set for all students for the next group session, in which theoretical phases (§ 13.3) can be inserted as required alongside the conversation training with SP, in which, for example, forms of *active listening* (§ 19) or *empathic feedback* (§ 20) are discussed, which in turn should then be tested in further conversations with SP.

The communicative skills acquired in this course are tested at the end of the semester in the OSCE procedure with SP, which is described in detail elsewhere in this textbook (§ 13.6, 41). *Video conferencing* is described below as a further component of this course.

General practitioner video conference

Video conferencing has been a permanent fixture at the Department of Psychosomatics for over 15 years and is a mandatory part of the course described above.

The video conference is a *problem-oriented*, *practice-based* and *interactive* course in which students will expand their clinical and communication skills by means of *participatory observation, self-reflection* and *clinical reasoning* using an exemplary patient case from a general practitioner's (GP) practice.

The basic concept is that small learning groups (of 10-12 participants) meet in a specially equipped seminar room to watch videotaped conversations from a GP consultation.

Initially, the central objective is for the students to "look over the shoulder" of the GP during the consultation and thus gain a vivid insight into the conduct of the consultation and GP care practice (*participant observation*). As a rule, this is exemplified by selected cases that are treated as part of basic psychosomatic care in the GP practice.

In the follow-up discussion with the lecturers, everything that has "moved" the doctors-to-be can be discussed first (*self-reflection)*, before the medical discussion (*communicative competence*) and the clinical perspective (*diagnosis, therapy*) are discussed (*clinical reasoning*). Overall, this is a specific form of *model-based learning,* which typically reaches the level of *best-practice examples* (§ 13.4.4). If criticism arises, the students' *reflexive meta-competence* (in the sense of v. Uexküll, Wesiack 1991) can be promoted (§ 3.2, 6), in which alternative treatments and conversational continuations are subjected to critical reflection together with the GP and the course leader.

The actual conversation and treatment in the GP practice, which are the "subject" of the participant observation and reflection in the video conference, is carried out by experienced lecturers. The examples of conversations are about patients who visit their GP on a daily basis. An exemplary conversation between Dr. Reimer and a young patient (Julia) has been documented as a complete transcript (Köhle et al. 2010) of an approx. 8-minute "consultation" and analysed from a *multimethod* perspective (Koerfer et al. 2010, Kruse, Tress 2010, Szirt, Langewitz 2010, Obliers et al. 2010, Lausberg 2011).

The purpose of such a multi-method approach is, among other things, to obtain *best-practice examples* that are not only to be declared

as such, but identified in empirical analyses so that they can be used in further teaching with the necessary evidence (§ 13.4). We will return to this specific *comparative* approach of a multi-method analysis of doctor-patient communication under the particular aspect of *evaluation* (§ 40). It should be noted in advance that some of the *best-practice examples* we use in the practical section (§ 18-23) originate from these GP video conferences.

Lectures and block internship

In the 4th clinical semester, lectures lay the theoretical foundations for counselling and basic psychosomatic care for patients with specific mental illnesses (including eating disorders such as anorexia nervosa, somatoform disorders (e.g. irritable bowel syndrome, depression and anxiety disorders). Typical problems in conducting conversations (such as defensiveness, denial, clinging or dismissive behaviour, etc.) are discussed and tips for overcoming them are given. The lectures comprise 12 teaching units (TU) and performance is assessed by means of a multiple-choice exam.

The associated block course takes place after the lectures. The course is held in groups of 12 students. It comprises 24 TU and primarily addresses practical skills such as conducting an initial interview with a mentally ill person or communicating a serious diagnosis. These skills are prepared in seminars and then practiced with simulation patients.

Other topics include reflecting on one's own attitudes and behavioural patterns in the context of a (junior) Balint group as well as one's own experiences with therapy methods, including autogenic training, progressive muscle relaxation, music therapy and/or concentrative movement therapy.

Elective seminar "Breaking bad news"

In the 8th semester, students can practice breaking bad news (BBN, see also § 16, 38) intensively, using an oncological case study in 10 TU. The students first compile what characterises a "good" BBN conversation and what characterises a "bad" one. This is also done using video ex-

amples, which are viewed together and evaluated with regard to suitable and less suitable interventions.

At the heart of the course are interviews with a specially trained acting patient, in which the students take on the role of a doctor.

A formal performance assessment is not required for this teaching format.

14.3.2 Internal medicine

In the block internship in internal medicine, students are introduced to internal medicine patients by lecturers from the Departments of Cardiology, Gastroenterology, Nephrology or Haemato-Oncology for a full week.

As the students are expected to take medical histories and perform patient examinations independently as part of this internship, learning how to take a structured medical history is one of the main objectives. To this end, the course participants receive an accompanying script about anamnesis, findings and documentation. This provides a comprehensive guide to taking a complete medical history with structural suggestions and detailed explanatory texts.

The correct documentation of the medical history is equally important, which is discussed and ultimately leads to the creation of an exemplary doctor's letter.

Building on the prior knowledge gained from the courses on conducting doctor-patient conversations, the focus now shifts to the completeness of the medical history from a medical perspective, as well as internal medicine priorities. The students are given theoretical instruction and trained by the bedside: initially under the guidance of the instructor and later independently.

Bedside teaching is, by nature, experience-based learning. The instructors serve as role models and deepen the practical training through feedback. Competencies are formally assessed as part of the “PJ-Reife-OSCE” (“ready-for-PY-OSCE”) after the 9th semester.

14.3.3 Human genetics

Two teaching units of the human genetics seminar in the 7th semester are dedicated to the topic of human genetic counselling. In this seminar, students are taught about the process of human genetic counsel-

ling using theoretical content and interactive exercises. Human genetic counselling goes beyond the interpretation and explanation of molecular genetic/cytogenetic findings in a way that is understandable to laypersons. It also includes taking a medical history, including a family tree, as well as detailed counselling on the possibilities, limitations and consequences of genetic testing (including genetic prenatal diagnostics) and, if necessary, further support for the affected person and their family. The contents of the seminar are examined together with the contents of the human genetics lecture at the end of the semester as part of a multiple-choice exam.

14.3.4 General medicine

As part of the "Longitudinal Module in General Practice" (LoMA), climate-sensitive health advice is discussed in the 7th semester during GP consultations. The focus is on how doctors can provide climate-sensitive advice during general medical consultations. Here, students learn how to communicate climate-relevant aspects of healthcare (e.g. health co-benefits). As an exercise, for example, a dialog is written in which the students give climate-sensitive advice to a patient. This could be about adapting medication, providing information before a heatwave or advising on a more active lifestyle with a balanced diet that is good for both health and the climate.

The block internship in general medicine takes place between the 8th and 9th semester over ten course days for a total of 100 TU. It is completed by the students in a training practice affiliated with the University of Cologne. The aim is to provide a broad insight into the various facets of GP care. Students learn about long-term doctor-patient relationships in GP practices, which special features need to be considered and which advantages this long-term relationship offers for treatment.

In the area of communication skills, students learn how to deal with many different patients in the outpatient setting, e.g. when taking a medical history, making joint decisions according to shared decision making and explaining diagnoses or therapies (§ 10, 22). In accordance with the Cologne spiral curriculum, students can now apply their prior knowledge from the previous courses to GP practice in the block placement. Patient consultations and examinations are always carried out under the supervision of the supervising GP. In terms of methodology and didactics, the focus is on experience-based learning and model

learning. At the end of the internship, there is a final discussion with the teaching doctor with structured, personal feedback.

The block internship concludes with the "Objective Structured Clinical Examination (OSCE) 2 - Block Internship Final Examination". Here, the examination and communication techniques acquired in the block internship are tested in practice.

14.3.5 Psychiatry and psychotherapy

Special examination course: "Psychiatry" module

In the fifth semester, an interdisciplinary rotation course takes place over 15 90-minute sessions (two TU each) to teach practical clinical skills in addition to the "core examination course". The overall aim of this course is to teach general examination techniques of special disciplines (e.g. otoscopy, ophthalmoscopy, neutral zero method, etc.). One of these units is run by the Department of Psychiatry and Psychotherapy. The aim is to introduce students to the basics of exploring patients with a psychiatric condition. For this purpose, two scenarios with simulated patients are designed for each small group, in which the students can practically apply previously acquired knowledge on communicating with mentally ill patients to a "depressed patient" (building rapport and conducting conversations with patients with a psychiatric condition). Emotional barriers can be reduced through positive experiences in dealing with mentally ill patients and initial impressions of concrete strategies for action can be gathered.
A formative examination as part of the course takes place via a 360° assessment (self-assessment and feedback from the simulation patient, lecturers and fellow students.

Lecture and block practical course

The 17 lectures of the psychiatry and psychotherapy block take place in the 8th semester. In 45-minute units, the basics of mental illnesses in the field (i.e. schizophrenia, severe affective disorders, dementia etc.) are taught including their diagnosis and treatment.

In the subsequent block internship (20 teaching units) and seminar (10 teaching units), students should transfer the content taught in the lectures and the special examination course to everyday ward work and practical application. Emphasis is placed on the skills required to assess psychopathological findings and patient exploration.

By attending the teaching ward rounds, students can gain a practical impression of dealing with psychiatric patients and thus get to know the special communicative features specific to the discipline. Block seminars are held in the afternoon to reflect on what has been experienced during the internship and to link it to existing knowledge or assign it to communication theory models. There are also additional patient cases, whose clinical presentations are discussed in detail within the group and with direct reference to the patient.

Twenty percent of the internship are also assigned to child and adolescent psychiatry, during which the relevant content adapted to young patients is taught. In general, he assessment of learning outcomes is currently limited to theoretical content and takes the form of a single-choice exam. In addition, all students must record their interviews with the two patients they explored in small groups of 3 students using a standardized medical history and findings form.

14.3.6 Palliative medicine

Competence field: changing therapy goals

In the 9th semester, the interdisciplinary competence field "Changing Therapy Goals" takes place. It focuses on the transition from a "curative" to a "palliative" treatment goal, which becomes necessary if a cure is no longer attainable.

The topic is dealt with in seminar form and in small groups. Various case vignettes are analysed and discussed in small groups in order to be presented to the larger audience later. Initially, students work on the therapy goals of "life extension" and "quality of life", reflecting on their relevance for oncology, intensive care, and palliative medicine with an interdisciplinary team of lecturers. A process for changing treatment goals will be developed with the students, explaining which decision-making processes need to be communicated with patients as part of participatory decision-making to achieve informed consent. The importance of establishing indications and evaluating potential therapies based on the four principles of medical ethics is made clear to avoid misunderstood autonomy and to prevent decisions being left to patients or relatives, even though these should be evaluated and made by the therapeutic team.

In the "End-of-Life Phase" module, students learn how to recognize signs of imminent death and how to communicate this assessment empathetically with patients, relatives and the team. This creates a com-

mon starting point in which changes to treatment goals and a palliative care treatment plan for typical symptoms during the dying phase can be developed in case study groups. Nursing, medical and psychosocial aspects are considered. A particular focus is on communicating these strategies with the dying and their relatives in the context of case studies. In particular, the discussion with relatives is addressed. It is important for students to be able to inform and advise relatives sensitively and in layman's terms.

The third module, "Living wills", which pays particular attention to communication, is primarily concerned with self-reflection as a prerequisite for counselling with regard to so-called living wills. The students explain their own ideas of a dignified death or "end-of-life care". They then anticipate their treatment wishes and limitations in cases of incapacitation. In this context, they reflect on their personal attitude toward mortality, their own experiences with dying, grief and death as well as their personal understanding of their role as physicians.

In the module on ethical decision-making at the end of life, four cases on assisted suicide, killing on demand, limiting therapy and accepting a shortening of life are again used to discuss the ethical and legal assessment and to work out how the patient's dying wishes can be further explored and what other options can be discussed with those affected.

Assessment in this competency area is through a written paper. Based on their own case, students trace a change in treatment goals and substantiate this with the help of guidelines and instruments such as "Klug entscheiden" (in German; www.klug-entscheiden.com/empfehlungen/palliativmedizin) and "Supportive and Palliative Care Indicators Tool" (SPICT; www.spict.org.uk). The ethical analysis will also assess the extent to which patient self-determination has been considered or how autonomy could be better respected. In a conclusion, the students derive implications for their own future medical practice.

Cross-sectional block of palliative medicine

The overarching learning objectives are to experience communicative competence as a key skill that can be learned, to experience one's own abilities in a protected setting and to deliver messages with knowledge of the SPIKES and NURSE conversation guidelines (§ 16, 20, 38).

Practical training in palliative medicine takes place as part of the PYSTArT block (see § 14.3.11) and takes place on several afternoons in

small groups. Relevant content is put into practice in simulated scenarios with acting patients under expert guidance: communication with patients and relatives in the context of discharge management for palliative outpatient care. Students also practise delivering serious news and adjusting treatment goals in the case of life-limiting and/or terminal illnesses.

The communicative skills that are acquired here include, among other things, naming one's own goal for the conversation and well-founded preparation of the conversation. In addition, students should grasp the subjective viewpoint of the patient and their relatives and incorporate this into the communication, wherein their own discussion objectives are dynamically adapted to the patient's wishes and the diagnosis and findings are communicated in a form appropriate to the patient situation. This involves a balanced distribution of communicating professional knowledge and empathically engaging with emotions in the context of coping with the illness. Students also learn to name their own emotional experiences and to differentiate between their own emotions and those of the patient. They also identify and discuss ways of dealing with stressful situations and their own emotions and how to respect their own boundaries.

This is accompanied by extensive peer feedback and reflection by applying the basic rules of feedback in a palliative context and re-evaluating the set goal of the conversation. The feedback from the simulation patients focuses primarily on the experience of emotions and the therapeutic relationship.

In further units in the cross-sectional block, forward-looking care planning for neurologically ill people is presented as an example and communication in the interprofessional team is explained.

14.3.7 Medical ethics

The competence field "Ethics in the Medical Profession" takes place in the 6th semester. This is an interdisciplinary lecture unit consisting of three 90-minute sessions.

The competence field deepens the medical ethics basics of the 5th semester lecture by means of ethical dilemmas in the clinic. It is divided into 45-minute sections from the beginning to the end of life. Six lecturers - from the fields of medical ethics, paediatrics, gynaecology, intensive care, geriatrics and palliative medicine - present classic moments of difficult decision-making and patient vulnerability. The challenges that

can arise here in communication between doctors, patients and their relatives will also be discussed and solutions proposed together.

The cognitive learning objectives are then tested by means of a computerized multiple-choice exam.

14.3.8 Gynaecology

The block internship in gynaecology and obstetrics takes place in the 4th/5th clinical semester (corresponding to the 8th/9th semester). It comprises of 10 TU, two of which are supported by simulation patients.

The aim of the communicative components is to train the specific content and attitudes (including respecting shame boundaries) in the context of a gynaecological/obstetric anamnesis. The practical course concludes with an OSCE examination.

14.3.9 Medicine of ageing

The block practical course in the 10th semester is divided into two sections. The first day takes place as peer teaching in the Cologne Interprofessional SkillsLab & Simulation Center (KISS). There, students learn about some of the specific considerations when working with elderly patients. In addition to the specialist, clinical aspects, they will also learn how to communicate with and understand the corresponding limitations of older people. This is largely achieved through self-experience using age simulators (including the GERontological Training Suit; GERT). For example, the GERT enables students to experience the musculoskeletal and sensory limitations typical of old age. As part of this block internship, age-specific treatment and diagnostic options such as multidimensional assessment, cognitive tests, motor tests and also age-typical communicative difficulties during surgery consultations, telephone appointments or regular ward rounds are simulated and made subjectively tangible.

The second day of the internship takes place in the form of bedside teaching at the St. Marien-Hospital Cologne. Typical cases in medicine of aging are discussed and students gain experience in dealing with typical communication difficulties associated with old age.

14.3.10 Pharmacology

Elective seminar "The prescription dialogue"

This elective course of 6 TU is open to students from the 6th semester onward, i.e. after completing the pharmacology block (Hauser et al. 2017).

Using the example of drug therapy for the "widespread disease of high blood pressure", students will work out which aspects are of particular importance when prescribing medicines and how these can be appropriately addressed in the doctor-patient dialogue. Background is provided by "general pharmacological" aspects such as adverse drug reactions or contraindications on the one hand, and drug adherence and the patient's desire and right to be involved in the treatment decision on the other. These aspects are unearthed in a case-based manner (problem-based learning) to jointly identify difficulties and develop solutions. The concept of participatory decision-making ("shared decision making", cf. § 10, 26) is then introduced (or recalled) to the students and a guideline for a structured prescribing dialogue is jointly developed, in which information about essential aspects of drug therapy on the one hand and patient participation on the other are integrated. As part of this elective offer, we developed a guideline for conducting a prescription dialogue (§ 26), which has also been tested in a clinical study in the GP sector in the meantime (Hauser, Matthes 2017, Hauser et al. 2017; Kirsch, Matthes 2021).

At the end of the week, students can practise what they have learned in a simulated prescription dialogue with an actor. In addition to direct feedback from the actor, instructors and (by request) peers, this also offers the possibility of a video recording to make their own communicative behaviour visually and acoustically tangible.

Area of expertise "Adherence and self-medication"

The interdisciplinary competence field in the 7th semester comprises 4 TU as well as an online slide show for asynchronous learning. Different perspectives on adherence and self-medication are presented, namely those of pharmacology, psychosomatics/psychotherapy, the general practitioner's perspective and that of pharmacies. The aim is, on the one hand, to illustrate the different focal points and perspectives to stu-

dents, and on the other hand to point out the different demands and behaviours with which patients may confront e.g. general practitioners, specialists or pharmacists. Students should understand the causes and backgrounds (e.g. in terms of intentional and non-intentional non-adherence) to be able to explore and take this into account later in their studies (e.g. during clinical traineeship or the final year) and after their studies in doctor-patient contact. In addition, the benefits and necessity of multiprofessional communication are made clear, in which, for example, doctors interact with pharmacists for the benefit of their patients.

Modules in the PY preparation course for the PY-STArT block

Pharmacology is represented with several modules in the PY-STArT block, a one-week preparation for medical students in the 10th semester for the practical year (Kirsch, Johannsen et al. 2019). In the pharmacology modules, the focus is on sensitising students to aspects of drug safety in the broader sense by making them aware of their skills (and deficits) with regard to the application and communication of pharmacological knowledge.

In simulated doctor-patient discussions, students should recognise risks for, or problems that have already arisen in relation to medicines, such as medication errors, adverse drug reactions or interactions, find solutions to the existing problems together under medical or pharmaceutical moderation and communicate these to the "patients". Since the winter semester 2021/2022, one of the two simulation modules has dealt with the prescription dialogue, considering the dialogue guide developed as part of the elective course offer described above. A student initially conducts a prescription interview spontaneously. This conversation is observed by fellow students and then discussed together. This takes place under the moderation of a doctor or pharmacist with reference to the dialogue guide. Immediately afterwards, the same student conducts the interview again as if for the first time.

It was shown that the content of the conversations improved significantly, and this learning effect was still demonstrable three days later in a written test. Interestingly, compared to students who did not take part in this module at all, those who had only observed and discussed the simulated conversation but not actively held it, did also benefit (Kirsch and Matthes 2021).

In a second simulation module, a drug interaction is to be identified, and the patient to be informed about the consequences and the next

steps. However, this also only takes place after a moderated discussion between the student leading the conversation and their fellow students. As the interaction to be discovered could have been avoided, this module also addresses how to deal with medical errors.

A third module, which students complete online, asynchronously and self-directed, addresses this topic using video examples created by employees of the Cologne Interprofessional Skills and Simulation Center (KISS). Students are asked to reflect on different ways of dealing with medical errors against the background of the literature, which is also made available digitally.

The acceptance of the pharmacology modules was reflected in the evaluation results, including the free text comments, in which the students also described having become aware of the importance of aspects relevant to the safety of medicinal products through the modules (Kirsch, Johannsen et al. 2019). In 35 interviews, students also named areas in which they identified deficits. These correspond to the topics intended for patient safety when designing the modules (e.g. interactions, adverse effects, dosages).

14.3.11 Preparatory course for the "Practical Year"

Before the start of the practical year (PY), students of the model degree program in human medicine in Cologne are meant to be prepared for everyday medical practice as PY students. The PY-STArT block (STArT = key competence training and application in realistic daily routines) offers the opportunity to realistically experience and train everyday clinical life and medical practice over the course of a week on a simulation ward.

The Department of Internal Medicine II, the Institute of Pharmacology, the KISS (Cologne Interprofessional Skills and Simulation Center), the Institute for the History of Medicine and Medical Ethics and the Department of Psychosomatics and Psychotherapy as well as the Center for Palliative Medicine are currently involved in the implementation.

In its scope, its depth of simulation and its consistent, interdisciplinary implementation, the PY-STArT block functions as a reference for medical faculties across Germany to date.

Teaching and learning concept of the STArT block

The aim of the PY-STArT block is to optimally prepare students in their sixth clinical semester for the practical year phase. During their one-week activity on a simulation ward, students are given the opportunity to apply their knowledge and skills to clinical situations and case studies. In contrast to the more theoretical parts of the courses in medical studies, here knowledge, skills and attitudes are to be integrated. The protected space of a simulation is intended to encourage students to try out their medical skills before the practical year without fear of the consequences that could result from mistakes in practice.

In small groups of six participants, the students spend a whole week going through various simulated scenarios. Experienced and extensively trained simulation patients are available to present illnesses and treatment situations. On the one hand, classic ward rounds are carried out, but everyday medical practice away from patient contact is also simulated. The majority of the simulation is moderated by an interdisciplinary team and is also intended to reflect the interprofessional image of inpatient care. The accompanying doctors in particular serve as role models for the students in various everyday situations. This follows the concept of the Cologne spiral curriculum (§ 14.1.3) and facilitates the students' transition into the final year by linking to previous content.

Through simulated everyday life on the ward and contact with simulated patients, students have the opportunity to further develop the diagnostic skills and communication techniques they have learned during their studies at the patient's bedside before the start of their practical year. This includes anamnesis interviews, physical examinations, ward rounds, writing medical letters and morning or lunchtime meetings. An important element is the constant use of surprises to lure students "out of their shells". For example, in a moment of relaxation after the ward round, there is an emergency in a room that has already been visited. In addition to incorporating additional, unexpected content, this is also intended to increase the depth of the simulation.

Great importance is also attached to structured, multifaceted feedback (debriefing). This shows students which skills they are good at and which they are less good at (uncovering learning potential). This is implemented methodically through 360° feedback, starting with self-reflection, followed by feedback from the simulation participants and fellow students and teachers (in order of greatest impact). Strengths and weaknesses should be clearly identified and, if possible, advice on how to change behaviour should be given.

Practical cases used

On the simulated ward, there are several simulation patients with different focal points and learning objectives. Over the course of the week, the clinical condition, the laboratory values and even the patients themselves change on the ward. In terms of communication, the students should learn to respond to the different needs of the individual patients according to their respective situations. The following are examples of some cases.

For example, an understandable and appropriate medical history is to be carried out for an elderly and confused patient from a care home with a fever of – as yet - unknown origin. This is a typical everyday situation that the participants will often be confronted with later, but which is not easy to master.

Another patient is undergoing treatment for the re-adjustment of decompensated diabetes mellitus. The students should rule out possible somatic causes and recognize a lack of adherence to therapy due to an adjustment disorder caused by an unprocessed separation. The mental health disorder should be adequately addressed. At the same time, students should be made aware of the importance of listening carefully and taking a psychosocial view of therapy complications (cf. § 15 and 16).

In another case simulation, the sensitive topics of abdominal pain and intercultural competence are combined in a patient with a culturally diverse background. Students should learn to register the sociocultural values and norm systems. They should also develop an awareness of the shame reaction to the violation of norms in an intercultural context. The basis of the desired multi-perspective view of the situation is the diversity model according to Gardenswartz and Rowe (2003), according to whose criteria the students should reflect on their communicative interaction.

The palliative medicine practical integrated into the STArT block also takes place on the simulation ward. Here, the students' task is to communicate serious news about incurable and terminal illnesses ("breaking bad news", § 14.3.6.).

In addition to the cases with simulated patients, other topics are designed to prepare students for their day-to-day work as physicians. A major challenge for future doctors is the communication of typical hospital procedures, such as diagnostic processes and treatment procedures. Inadequate communication between doctors and patients has a negative impact on diagnosis, treatment and therapy adherence. This is where two modules come in: The module "The Challenge of Communi-

cating Clearly" deals with language barriers. Based on authentic excerpts from interpreted conversations, students are made aware of the need for adequate medical communication when using the help of interpreters or translation apps. In a particular simulation module, students practise communicating with patients, who are in a generally bad condition in the presence of an accompanying person. This is intended to raise students' awareness of the problems associated with a patient-centred language style (cf. § 27) and patient-inclusive communication in triadic constellations. This objective is implemented through appropriate coaching following the simulations, in which the students' verbal and non-verbal communicative approach in relation to the triadic constellation is specifically reflected upon.

Two further modules (theoretical input and continuation on the case of the patient with a culturally diverse background and a written follow-up (self-study)) deal with the topic of "Perception and handling of diversity in healthcare" (cf. § 28). This deals specifically with the way in which diversity is recognised and dealt with within the healthcare system. This encompasses a variety of aspects, including cultural, ethnic, linguistic, socio-economic and gender diversity. The necessity of this topic arises from the very different patient backgrounds that occur in everyday clinical practice. Here, the challenge is the fact that doctors often construct clear boundaries between "natives" and "strangers" or the "familiar" and the "unfamiliar". This approach often leads to a lack of individuality in the individual patient, so that he or she merely serves as a projection screen for previous experiences with a particular culture, nation or religion.

The modules therefore focus on the need to raise awareness of the needs of different population groups in healthcare, the development of strategies to integrate cultural competencies, the promotion of measures to eliminate inequalities in the healthcare system, the promotion of inclusive practices in healthcare, measures to ensure access to healthcare for marginalized groups and the evaluation of diversity initiatives in healthcare. The aim is to ensure that healthcare adequately addresses the needs of all patients and removes barriers to accessing healthcare in order to ensure equitable and high-quality care for all (Hallal 2015).

In summary, the practical cases of the PY-STArT block offer a broad cross-section on many topics of everyday medical practice, the comprehensive reflection of which is possible in practice-oriented simulation and represents an important building block for doctor-patient communication in the students’ further professional career.

14.4 Further information

The didactic-methodological concepts that are specific to the *Cologne Communication Curriculum* (CCC), such as *problem-oriented* or *comparative* learning using *best-practice examples*, have already been presented and discussed above (§ 13). From the literature already cited there and beyond, reference is made here by way of example to historical-critical overviews and curricular presentations by Brown 2008, 2012, Fragstein et al. 2008, Kiessling et al. 2008, Bachmann et al. 2009, Silverman 2009, Hargie et al. 2010, Roch et al. 2010, Harden 2011, Lipkin 2011, Kiessling, Langewitz 2013, Deveugele 2005, Deveugele et al. 2015, Härtl et al. 2015, Perron et al. 2015, English 2016, Bates et al. 2016, Zims et al. 2019, Kiessling et al. 2019, Hempel et al. 2021, Bachmann 2022, Vektaramana et al. 2022.

We discuss further training opportunities for medical communication within our faculty separately (§ 16, 43), as well as the qualifications of our tutors and lecturers, who are ultimately responsible for communication training ("teach the teachers"). The training of simulation patients (SP) at the Department of Psychosomatics in Cologne as well as in the Office of the Dean of Studies and the faculty as a whole is reported on elsewhere in the handbook (§ 13.6, 41).

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Further references on doctor-patient communication can be found in other topic-specific chapters and in the complete bibliography of the handbook.

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Citation note

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