Marc Bakker

Boom

ProActive Nursing: Clinical Judgement

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Exposure functions

‘PROUD TO BE A NURSE’

INTRODUCTION

This book on clinical judgement is intended primarily for students, but it is also suitable for nurses interested in further developing their clinical judgement skills. For some years now 'clinical judgement' has been an importance subject in educational institutions and in clinical instruction. Although it is not long ago that 'clinical judgement' was a new term for many, it is now professionally recognised and included in both the formal and extra-curricular components of training programmes.

Clinical judgement without a solid base of (biomedical) knowledge is impossible and potentially harmful to the patient. You need to be able to apply your biomedical knowledge daily while caring for patients. This requires a lifetime of study, repetition and maintenance of one's clinical knowledge base. This book aims to be a helpful partner in that process.

The first edition of the original Dutch version was published in 2013, under the title of *Klinische problematiek inzichtelijk* (Insight into clinical problems). The second edition was published in 2017, followed by the third edition in 2022. And now the third edition is translated in English.

Part I: Time-out for clinical judgement
Part I focuses on clinical judgement, based on the 'Time-out' practice model. This model is designed specifically for teaching clinical judgement in practice. In the past five years, this model has been used, tested and adjusted within a number of educational pilot projects. These projects were conducted in a general hospital (twice), as well as in a large care institution for people with mental disabilities and within the setting of a nursing home.

Part II: Insight into clinical problems
The second part contains the 18 ICF healthcare topics, arranged according to the ABCDE method. Each healthcare topic is summarized in a useful mind map.

I would like to thank the nurses, teachers, educators and other experts on clinical judgement I have worked with. As a nurse, founder, teacher and author of *ProActive Nursing*, I am proud of what we have accomplished, but we will continue our mission.

I wish you the greatest success in learning or further developing clinical judgement skills.

Marc Bakker

The question...

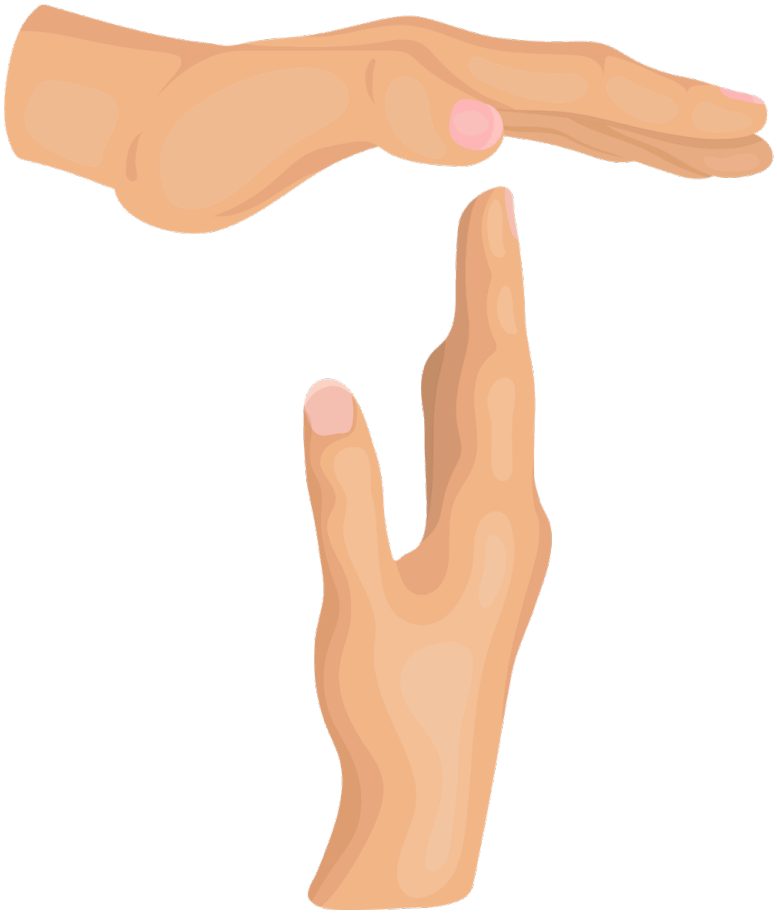
How is it going?

Hoe giet it? (Frisian)
Hoe-is-ie? (Bargoens)
Kon ta bai? (Papiamento)
Comment ça va? (French)
How you doing? (English slang)
Cómo estás? (Spanish)
Wie geht's? (German)
Come está? (Portuguese)
Hvordan går det? (Danish)
Hur mår du? (Swedish)
O genki desu ka? (Japanese)
Ni hao? (Chinese)
Habari gani? (Swahili)
Jak sie? masz? (Polish)
Ma sjlomchech? (Hebrew)
TI kAnis? (Greek)
Ce faci? (Romanian)
Mitä kuuluu? (Finnish/Suomi)
Kak si? (Bulgarian)
Kak dyela? (Russian)
Kayf Halek? (Moroccan)
Bagaimana kabarnya? (Javanese)
Come stai? (Italian)
Nasilsin? (Turkish)
Hoe gaan dit met jou? (South-Afrikaans)
Otto-sjim-nikka? (Korean)
Jak se dar'i? (Czech)
Kako ste? (Croatian)
Hale shoma chetor ast? (Farsi)
Kiel vi fartas? (Esperanto)
Hvordan går det? (Norwegian)
Apa kabar? (Malay)
Izzayyik (Egyptian)
Aap kaiseh hai? (Hindi)
Hoe gaat het? (Dutch)
Wie geit ut? (Limburgish)

...is often difficult to answer

PART I

TIME-OUT FOR CLINICAL JUDGEMENT



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1 WHAT IS CLINICAL JUDGEMENT?

Clinical judgement is a specific, professionally oriented form of associative and critical thinking. In daily practice, we are not always conscious of this. Thinking is a particularly rapid process and, for the most part, it is done more or less subconsciously (automatically). We quickly link what we see (observations) to our biomedical knowledge, and we immediately know what to do and what to say. Clinical judgement is a high-level cognitive skill, and all healthcare professionals obviously possess optimal skills in this regard.

Clinical judgement cannot be learnt overnight, however, nor is it a simple task to acquire a solid professional biomedical knowledge base. Clinical judgement is not easy to learn or teach for any of the professionals involved (e.g. nursing specialists, nurses, students, educators).

In international literature on clinical reasoning, the terms 'clinical judgement', 'clinical reasoning', 'problem-solving mentality', 'clinical decision-making' and 'critical thinking' are often used synonymously.

> 'Clinical judgment refers to the cognitive processes involved in making judgments, which includes making sense of data and cues and is defined as an interpretation about "a patient's needs, concerns, or health problems," followed by a determined course of action.' (Tanner, 2006, p. 204).

We regard clinical judgement as an important professional skill, not only in nurses. A wide variety of healthcare professionals currently receive training in some form of clinical judgement. Although all of these professional practitioners use the term clinical judgement, there are both similarities and differences in the clinical judgement applied within the various disciplines of healthcare. The most important similarity is that the clinical judgement of all healthcare professionals is aimed at the health problems of the patient.[1] The greatest difference is their primary focus.

1. *Clinical judgement is directed towards the* ***disease/condition*** *of the patient*

The primary focus of clinical judgement is to diagnose a disease/condition and to set up the appropriate medical (or other) treatment plan. The (end-)authority and responsibility of this rests with the physician.
Physicians diagnose diseases/conditions using a variety of tools, including medical history, physical examination, laboratory analysis and medical imaging. The *International Classification of Diseases* (ICD) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) are used as guides for the diagnosis of physical and mental diseases and conditions.

2. *Clinical judgement is directed towards the* ***clinical state*** *of the patient*

The focus of clinical judgement is to monitor and diagnose the clinical condition (state) of the patient who must endure, learn to live with, and/or possibly die from the illness in question, along with the accompanying medical treatment and possible complications, discomforts and woes.

1 For the sake of readability, we use the term 'patient' in this book instead of other similar terms (e.g. 'client', 'care recipient').

A patient's clinical state is monitored and diagnosed according to symptoms, worrisome signs, clinimetrics, scoring systems, blood values and specific monitoring. The International Classification of Functioning, Disability and Health (ICF) can be used to diagnose the clinical state of patients. In acute and/or life-threatening situations, the ABCDE method is used. Both of these methods are inter-professional, and are used by nurses, physicians and many other healthcare professionals. For further details, see chapter 4.

Well-being	ICF International Classification of Functioning, Disability and Health	Functioning
Feeling well/comfortable Coping Quality of life	Mental functions Sensory functions and pain Voice and speech *ABC Vital functions* Respiratory tract Respiration Circulation Oxygen supply to the heart Urinary system (and fluid and electrolyte balance) Blood *Disability* Nervous system Musculoskeletal system Endocrine system *Exposure* Skin and immune system (+skin wounds) Thermoregulation Digestion (+nutritional status) Reproduction	Learning and the application of knowledge General tasks and requirements Communication Mobility Self-care Housekeeping Interpersonal interaction and relationships Important domains of life Societal, social and civic life

Table 1 The ICF is a classification used to provide insight into clinical problems; all these healthcare topics are described in Part II of this book.

Several important ICF concepts:

- **Functions:** physical and mental characteristics of the human organism.
- **Dysfunctions**: abnormalities in or loss of functions and anatomical characteristics.
- **Disabilities**: difficulties that an individual experiences with regard to performing activities.
- **Participation problems**: a problem with an individual's functioning or participation in social life.
- **External factors**: the physical and social surroundings that serve to impede or support an individual's functioning.
- **Personal factors**: a person's individual background (e.g. age, sex, social status, cultural background, life experience).

In practice: inter-professional clinical judgement

It is important to realise that the aforementioned types of clinical judgement are functionally related to each other. Each is an extension of the other, and they are complementary. In terms of the safety and effectiveness of patient care, it is highly important for physicians and nurses to share, discuss, and coordinate each other's findings, opinions, and diagnoses through the inter-professional clinical consultation.

Clinical consultation

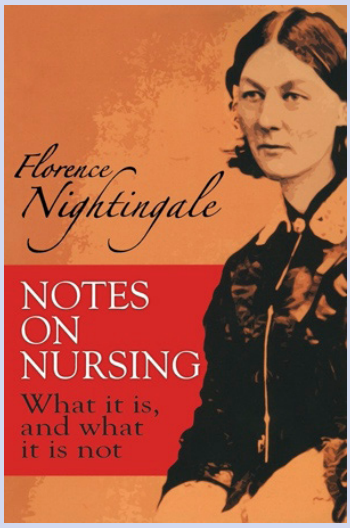
Clinical consultation can take many forms. It can take place by telephone (particularly during emergencies) or in a variety of other contexts (e.g. grand rounds, shift changes, multidisciplinary consultation or emergency intervention team calls). The patient is the focus for all of these forms of inter-professional clinical consultation. The goal of clinical consultation is to make clear agreements concerning the patient's care. It is obviously quite important for healthcare professionals who consult with each other about a patient's clinical state to speak the same language and use the same observations, methodologies and scoring systems. Particularly in acute situations, inter-professional clinical consultation is often conducted according to the SBAR method (situation, background, assessment, recommendation).

Figure 1 Clinical consultation between physician and nurse. Both of these practitioners have a specific way of looking at the patient. Good professional communication is of vital importance to the patient.

Florence Nightingale, the founder of modern nursing, wrote the manual *Notes on Nursing* in 1859. Amongst other propositions in this manual, she argued that '[t]he most important practical lesson that can be given to nurses is to teach them what to observe'.

Nurses should observe and know:

- which signals indicate improvement and which indicate the opposite;
- which signals are important and which are not;
- which signals provide evidence of problems and what type of problems.



Three basic professional skills of clinical judgement

Florence Nightingale's vision is still in force today, more than 150 years later. A well-trained nurse possesses well-trained basic professional skills: observation (clinical view), analysis (problem insight) and communication (clinical leadership). We address these basic clinical-judgement skills in greater detail in Chapter 4.

Nurses are expected to:

- be continuously alert and vigilant to changes in the clinical state of the patient;
- identify and interpret relevant clinical observations, taking into account the patient's medical background, illness/conditions, medication and treatments, as well as any desires and limits with regard to treatment;
- be able to arrive at and substantiate a diagnosis of the complete clinical state of the patient, including any risk of death.

Nurses are expected to be able to analyse:

- what is going well, what is at risk and what is not going well with regard to the ICF healthcare topics and/or the ABCDE vital functions;
- any clinical problems (disorders, dysfunctions, disabilities, participation problems and interactions).

Nurses are expected to demonstrate clinical leadership and to:

- share their findings in a timely manner with the relevant physician, other nurses and the patient;
- inform those involved of the patient's clinical state, complaints and problems (using the SBAR method);
- engage in proactive, patient-centred thinking with regard to the actions and care that are needed for specific patients and situations.

2 PATIENT-CENTRED CARE

Healthcare professionals engage in clinical judgement in order to understand the patient's clinical problems and provide appropriate care. This is nothing new. Healthcare is constantly developing, however, due in part to a number of important social developments that are now widely known:

- people are becoming increasingly older (ageing and increasing frailty);
- chronic diseases are increasing (curative care is shifting towards palliative care);
- multiple morbidities (e.g. hypertension, heart failure, COPD, diabetes, dementia) are becoming more common;
- people are working and living at home for longer (self-sufficiency in health and daily functioning);
- patient-centred care is becoming more common.

We address the latter point in greater detail in this chapter. Care is no longer considered good unless it is 'patient-centred', with the patient being the 'central focus'. In recent years, studies have investigated the opinions of patients (with conditions including heart failure, hernia's, breast cancer, arthritis and hip/knee surgery) with regard to healthcare. One assumption was that patients with acute symptoms would assign less importance to patient-centred care. Such is not the case. All of the patient groups investigated considered patient-centred care to be of above-average importance.

Patient-centred care
The patient is the starting point; a unique person with a unique history, future and goals. Getting to know the patient and providing care customised to the patient's wishes, involving relatives and loved ones, maintaining control—even with regard to palliative care—and setting care goals are all criteria for providing care that is customised to the individual wishes, needs and personal characteristics of the patient.

Four areas of focus:

1. **compassion**: the patient experiences closeness, trust, attention and understanding.
2. **uniqueness**: the patient is seen as a unique person with a personal context that matters and an individual identity that should be allowed to flourish.
3. **autonomy**: the patient has the possibility to exercise individual control over life and well-being, including with regard to palliative care.
4. **healthcare objectives**: the patient has clear agreements with regard to objectives and outcomes in relation to care.

Protocols and standards of care

Healthcare professionals are expected to act according to the standards of quality (guidelines, diagnosis-treatment combinations [DTC], standards of care and protocols). These standards should ideally be evidence-based or corroborated as best practices. In itself, the protocolisation of care in recent decades is regarded as an important quality improvement. At the same time, however, the realisation has emerged that, by definition, such guidelines and protocols cannot be patient-centred. It is also important for the patient to know that protocols are not sacred. Protocols exist in order to ensure the provision of proper, safe care. They are not intended to hinder people. Fortunately, deviations from guidelines and standards are allowed, but they must be justifiable.

Context of the patient

Patient-centred or person-centred care requires care providers to do more than study the medical history, the current disease situation, the treatment and its prognosis. They must also investigate the various personal characteristics, personality traits, life experiences and lifestyles of their patients. What is their outlook on life? What do these chronic (or acute) diseases and the experience of being ill mean to their patients? What are their patients' life goals? In which ways are their patients limited in their functioning? Healthcare professionals combine all of this information and, most importantly, consider what the diseases and experience of being ill mean for their patients' well-being and quality of life.

Desires and limits with regard to treatment

Nowadays, patients are invited to devote careful consideration to what they want in treatment and where their limits lie. The subject of 'limits to treatment' can be difficult for both patients and their care providers. It is therefore important and wise to start thinking about possible limits to treatment as soon as possible. When people suddenly become ill and end up in the emergency room, with unfamiliar doctors and nurses, it can be difficult for them to make clear what their desires and limits are.
It is of the utmost importance for desires and limits with regard to treatment to be discussed, recorded in patient files, and made known to other parties involved, including nurses and relatives. In the event of an acute change in the patient's clinical state, those who are responsible for the care at that time should be aware of the patient's desires and limits with regard to treatment.

The most important limits to treatment are listed below:

- Do not resuscitate (DNR). The question of whether or not to resuscitate is often asked when individuals are admitted to hospitals or nursing homes. Any agreements that are made are then documented.
- Do not intubate (DNI): do not artificially take over breathing with a respirator.
- No intensive care: no admission to the intensive care unit (ICU, e.g. for the support of blood pressure or artificial ventilation).
- No coronary care (cardiac monitoring): no admission to the coronary care unit (CCU) for cardiac rhythm monitoring.
- No dialysis: no renal function replacement.
- No surgery.
- No blood products: no administration of erythrocytes or platelets.
- No antibiotics: no treatment of bacterial infections.
- No tube feeding: no administration of artificial nutrition through a gastric (or other) tube.
- No invasive diagnostic procedures: no new examinations that could be burdensome.
- No hospitalisation.
- No further treatment: termination of treatment, with the exception of treatments aimed at comfort (counteracting pain and shortness of breath). Such directives do not concern the active termination of life (euthanasia).

Futile treatment

The discussion above might seem to imply that patients have full freedom of choice in healthcare at all times. This is obviously relative. One important principle in the provision of care is that care should be neither withheld nor imposed. For patients, healthcare is a right, but it cannot simply be enforced. Any medical (or other) treatment or intervention should always be able to be justified. Such justification should be positioned within a specific interest of the patient. Treatments that are not

(or that are no longer) in the interest of the patient are known as medically futile treatment. Unnecessary medical intervention is not permitted.

The following considerations can be used to assess whether treatment would be medically futile:
1. the **effectiveness** of the treatment: to what extent does the treatment have a positive effect on the underlying disease?
2. the **proportionality**: to what extent is the severity of the treatment in reasonable proportion to the goal that can be achieved with it?
3. will the patient be able to achieve a **minimum level of functioning** as a result of the treatment? For example, a patient who is in an irreversible coma is unlikely to achieve this level.

In such cases, treatment could be medically futile. Whether an intervention is or is not medically futile is up to the judgement of healthcare professionals. In many cases, however, there is a grey area in which discussion with the patient or family may arise concerning the issue of medically futile treatment.

Communication

Patient-centred care is characterised by good communication with the various care providers and shared decision-making concerning the treatment. It is thus characterised by inter-professional working methods. Patients consider this extremely important with regard to all treatments.

The **multidisciplinary** approach centres on approaching a topic or problem from a variety of perspectives, without integrating the disciplines/fields involved. In the **interdisciplinary** approach, the various fields/disciplines need each other in order to solve a problem or investigate a question.

Inter-professional cooperation takes place from within a single vision and care plan. This is in contrast to **multidisciplinary cooperation**, in which the various professions work together but are also able to work alongside each other in an organised manner.

Important: Nurses DO NOT make their own medical diagnoses, and they NEVER make their own decisions concerning treatment plans. They nevertheless contribute critical input in considering 'How it's going' with the patient and which care is needed for that specific patient.

Friendliness and participation in deliberations and decision-making

A researcher once proposed the following: 'It apparently does not matter which health problems patients have. They are well aware of what they consider important.' Patients usually have a clear image of patient-centred care, and this is always high on their list of priorities. This is not necessarily surprising, as patients are often in a state of uncertainty and need good information in order to cope with their health problems. Patient-centred communication contributes in this regard: healthcare professionals should be friendly and provide a listening ear. Patients also want to feel that decisions are not being taken behind their backs, but that they are able to participate in decision-making concerning the treatment. Shared decision-making is a right. Physicians and nurses must therefore allow patients space for this.

Healthcare is teamwork

Healthcare is teamwork, and clinical judgement is as well. In daily practice, physicians and nurses collaborate very closely in the care of the patient. Medical care and nursing care should be coordinated. Clinical consultation provides the foundation for teamwork in the care of the patient. It is here that the clinical-judgement skills of the various professionals meet. Physicians and nurses engage in intensive consultation with each other with regard to the patient's clinical state, and they listen carefully to each other's substantive findings, concerns and recommendations. The goal is always to optimise the care to be provided to the patient.

Figure 2 Healthcare is teamwork; clinical judgement is too!

Central role of nurses

Nurses play a central role in relation to a wide range of healthcare professionals. Nurses are often very close—both literally and figuratively—to patients, with their pain, tightness of the chest, nausea and countless other discomforts and emotions that accompany the disease, the illness and the associated treatment or operation. Nurses are constantly (night and day; 24/7) occupied with a wide range of care duties, administering medication, taking care of equipment lines and wounds, performing nursing procedures and caring for, mobilising and assisting patients (who are sometimes very ill) and their relatives. For this reason, nurses are in an ideal position to monitor the patient's clinical state, to engage in problem-centred thinking and to participate actively in the care that is appropriate for the patient in question. Your clinical judgement and clinical leadership are at the very heart of our nursing profession: safeguarding the interests of the patient and providing patient-centred care.

Advocate for the patient

Nurses can act as 'advocates' for patients, particularly in situations in which they are temporarily or permanently incapable of indicating what is or is not going well. Nurses actively consider what is best for their patients. They apply empathic ability, professional knowledge, professional and life experience, and clinical leadership in the interest of the patient.

Threefold focus

Every nurse has the desire to know: 'How is my patient doing?' Nurses approach their patients in order to ascertain their problems and needs for care with regard to their personal well-being, bodily functions and functioning. They do this by using patient-centred clinical judgement.

3 TIME-OUT PRACTICE MODEL

In their daily professional practice, nurses come into contact with a wide variety of people and care situations. This requires a great deal of flexibility. Each individual reacts to illness in a different way. The contact between nurses and their patients is often intense and frequent. Nurses are expected always to be able to assess 'how things are going' with their patients, as well as to respond appropriately. This is actually the major utility of clinical judgement in professional nursing practice.

How is it going?

All types of people constantly ask each other this seemingly simple question. In ordinary interaction, the reaction is often likely to be, 'Fine', 'Things are great' or something else to that effect. The question is often answered with a 'socially desirable' response. It is sometimes little more than a common way to start a conversation.

In the field of healthcare, however, the question has another goal. This is because care providers seek to obtain insight into a patient's health status before actually providing care. Within the context of nursing, the question 'How is it going?' is of the utmost importance to the course of the healthcare process. Nurses often act as 'patient advocates', particularly in situations in which patients are temporarily or permanently incapable of indicating what is or is not going well. They are in an ideal position to fulfil this role, as they are often so close to their patients, so familiar with their healthcare situations and trusted by patients. The ability to judge 'how it's going' is at the heart of our profession.

Clinical state

In addition to providing nursing care for the patient, nurses always have a very important moral (and legal) responsibility to monitor the patient's clinical state at all times. Every patient is different, and every patient is likely to have a different reaction (both mental and physical) to the disease, as well as to the illness and/or treatment. For this reason, nurses must always be alert and attentive to 'how it's going' with their patients. Are things going well? Are things not going well? What might be happening? What is the problem? What needs to happen? If these questions seem familiar to you, it indicates that you are engaged in vocational clinical judgement and that you are actively putting your professional knowledge into practice.

Time-out practice model

The Time-out[2] practice model was developed for teaching and practising clinical judgement. The development of the model was based on years of educational experimentation (field labs) and practical experience with professional clinical judgement. The model links the basic professional skills (observation, analysis and communication) to the threefold professional focus of healthcare:

2 'Time-out' is a term used in team sports to refer to an interruption of the game for the purpose of tactical consultation. Professional nursing practice is often characterised by hard work. Although this is fine in itself, it unfortunately often leaves little time for bedside education and learning in general. In this book, we use the term 'Time-out' to indicate that it is precisely for such teaching and learning that we should stop time. It can be highly educational and wise to take a Time-out for thinking about the patient.

the well-being, functions and functioning of the patient. As a whole, it provides a guide for practising with realistic case studies in order to 'master' clinical judgement.

Definition

Time-out is a practical tool for teaching and/or practising clinical judgement in a clear, structured and professionally focused manner at school and/or in professional nursing practice. It is a practical teaching tool for school-based instructors, practical instructors and students. The Time-out practice model can be used both at school and in the workplace to discuss and learn from patient case studies.

Objective

The Time-out practice model is a clear, structured guide for use when learning clinical judgement, and it was developed specifically for nurses and for clinical instruction. Nurses teach clinical judgement to each other: learning together through clinical judgement. The objective of the Time-out practice model is to help all parties expand and strengthen their:

- Three basic professional skills: observation, analysis, communication
- Biomedical knowledge base (physiology, anatomy, pathophysiology, pharmacology, psychology)
- Healthcare insight: patient-centred care

Figure 3 Time-out for clinical judgement regarding the clinical state of the patient.

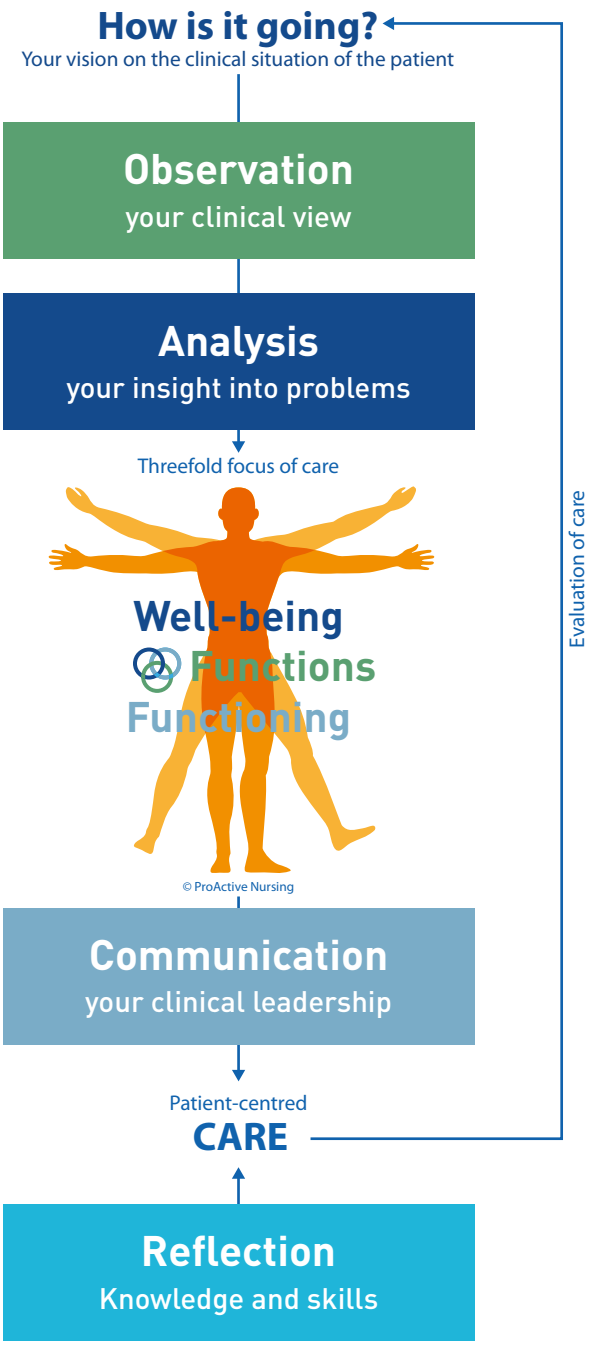


Figure 4 Time-out is a model for teaching clinical judgement in a clear, structured and professionally focused manner at school and/or in professional nursing practice.

Reflection

The Time-out practice model is a clear, structured guide for use when learning clinical judgement. No learning process is complete without reflection. This is the fourth skill to be applied within the Time-out practice model. Reflection consists primarily of asking oneself critical questions. For this reason, it is important to ask the following after each case: what have I learned from this situation? What should you do if you have teaching questions of your own? It is important to recall that it may require some time to answer these questions in a self-critical and functional manner.

New knowledge can be added through reflection. The learning process is self-guided with regard to clinical judgement. Professionalism in nursing includes the ability to discuss one's actions in various forms of consultation (e.g. patient meetings) or learning situations (e.g. supervision or peer review). Reflection can help to add breadth and depth to knowledge and basic skills.

Figure 5 Reflection is looking 'in the mirror'. Reflection is considering a healthcare situation in order to learn from it. Give careful consideration to what you have learned, and share it with others.

4 THREE BASIC PROFESSIONAL SKILLS

In this chapter, we provide a deeper discussion of the three basic professional skills involved in clinical judgement: observation, analysis and communication.

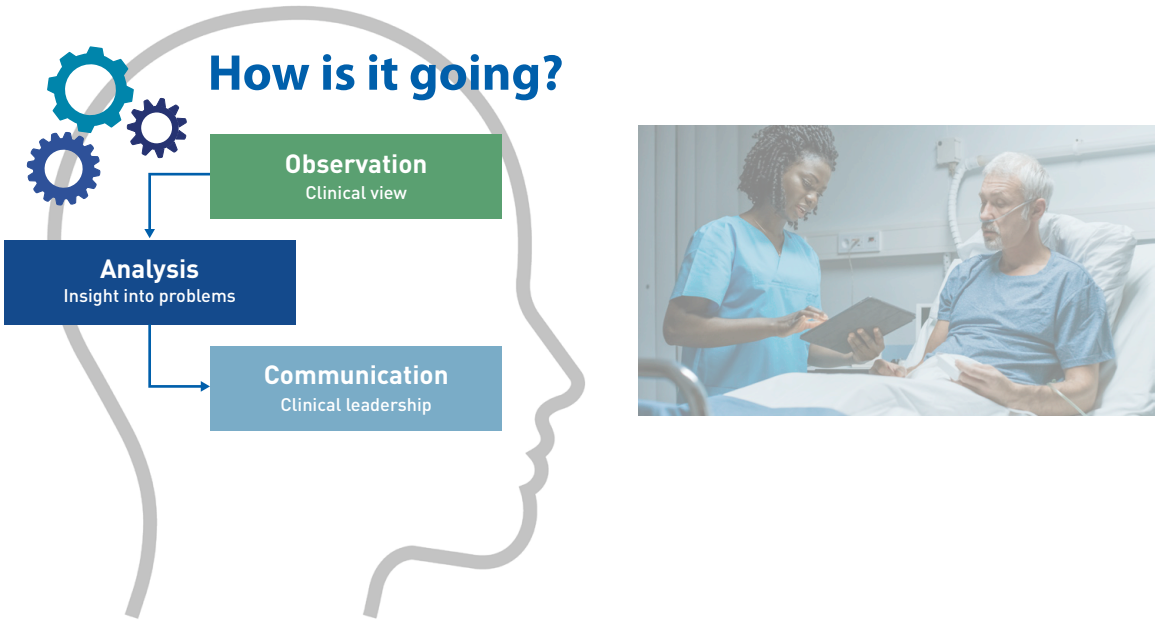


Figure 6 Three basic professional skills: observation, analysis and communication in practice. Nurses continually observe and analyse the clinical state of the patient, and they share their findings with the patient, the physician and other nurses who are involved. The goal is always to provide well-considered and optimised patient-centred care.

4.1 Observation

Nurses are expected to:

- be continuously alert and vigilant to changes in the clinical state of the patient;
- identify and interpret relevant clinical observations, taking into account the patient's medical background, illness/conditions, medication and treatments, as well as any desires and limits with regard to treatment;
- be able to arrive at and substantiate a diagnosis of the patient's complete clinical condition, including any risk of death.

Nurses are actually engaged in professional observation during any patient contact. This is not something that can be turned off or not done. The objective of such observation is to monitor and diagnose the clinical state of the patient. Observation is an important foundation for describing the clinical picture and the differential diagnoses. The clinical picture is a description of how a disease/condition is manifested in a patient. The clinical picture can be made concrete through 'observations and measurements'. Many healthcare professionals refer to this as their 'clinical view'. The trick is to be able to express this clinical view into words clearly, correctly and unambiguously.

We have a strong tendency to interpret the question 'How is it going?' with one or two words. For example, '...fine' or '...not so great'. It can be very difficult to indicate 'how it's going' with the patient in only one or two words. The answer can sometimes be clear at first glance, but this is often not the case. Our conclusions regarding 'how it's going' refers to our own opinion of the patient's current situation. To this end, we should ideally use clear, unambiguous gradations, such as:

- Well
- Reasonably well
- Moderately well
- Not well

Support your findings

It is important to realise that simply noting that 'it's not going well' or statements of that nature are of little use. In most cases, very little attention is paid to such observations. Simply making such a statement is regarded as speculative and unprofessional. Healthcare professionals are expected to be able to formulate and provide clear argumentation for what is not going well and why. The reverse applies as well: if someone else suspects something is wrong, you want to receive clear information on what, how and why.
It is always best to accompany our opinions with facts, particularly within the context of healthcare. Opinions should be supported by substantive knowledge, as well as with concrete, verifiable facts (e.g. clinimetrics, validated scoring systems). One extremely important principle in this regard (as expressed in an old Dutch saying) is that 'to measure is to know'. We should speak in plain, clear language and not lapse into assumptions or vagueness.

The following apply in practice

- Always be alert or vigilant to complaints and unfavourable signals.
- Use appropriate medical history taking methods to elicit further complaints or unfavourable signals: SCEBS, ALTIS.
- 'To measure is to know': collect basic clinimetric data, if possible: respiratory rate, HR, BP, saturation and temperature.
- If possible, assess whether there is a major difference from previous measurements.
- Use the (M)EWS score to determine whether the patient is at risk of death.
- If possible, collect recent blood values and/or data relating to specific monitoring.
- Document your findings.

Interpretation

- Interpret all clinical observations as a whole and from a patient-centred perspective. Are the observations consistent with the patient (given the specific medical background), with the disease/condition and with the medication used?
- Be attentive to logical and illogical combinations of outcomes (e.g. high cardiac frequency is consistent with a high temperature).
- Reason out what might be happening: consider the differential diagnoses and a working diagnosis.

Clinical observations at five levels

'Clinical observations' is a collective term for a wide range of complaints, worrisome signs, symptoms, measurements and other descriptions. There are many different observations, each with its own specific use and value. Although some are relatively subjective, they are valuable because of the simplicity with which they can be performed. For example, the observation of 'colour' is quite subjective. At the same time, however, the colour of the skin (e.g. red, yellow, pale grey, bluish purple) can provide a large amount of diagnostic input. Other observations are much more objective, albeit also more invasive. The key, however, is always to interpret them as a whole and within the context of the patient.

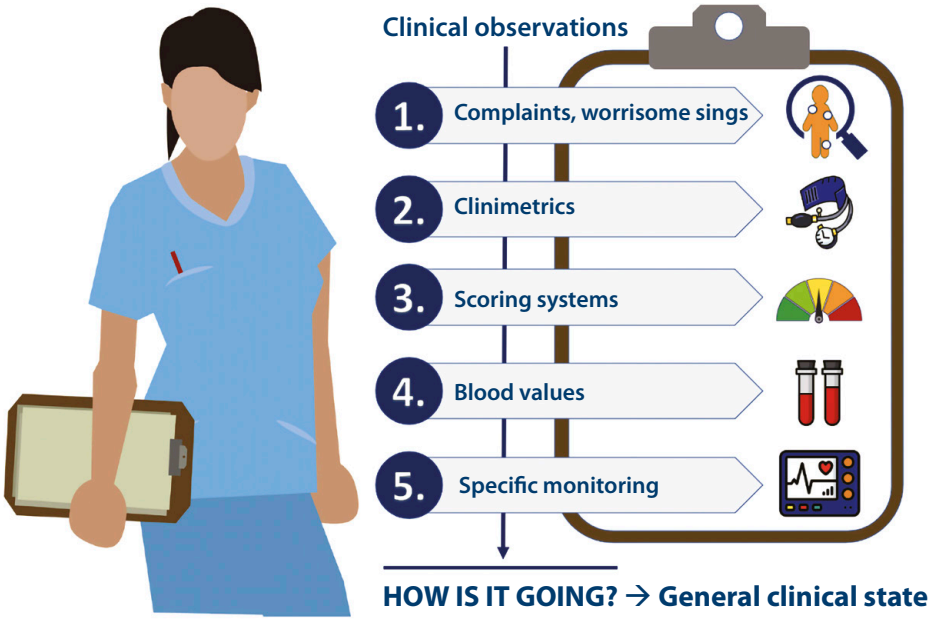


Figure 7 A patient's complete clinical state is monitored and diagnosed according to symptoms, worrisome signs, clinimetrics, scoring systems, blood values and specific monitoring.

1. Complaints and worrisome signs

Complaints and worrisome signs are often the first noticeable expressions that 'something' is not going well. Worrisome signs are not easy to measure and express in figures. Although they are often regarded as subjective, they may be early signals of an undiagnosed underlying disease/condition, a complication, clinical deterioration or similar factor. They are therefore important indicators that should be taken seriously. Specific medical history taking methods are available for eliciting further details about complaints and unfavourable signals. General medical history taking methods include SCEBS (psychosocial interview) and ALTIS (exploration of pain complaints). These methods are described in Part II of this book.

Worrisome somatic signs		Worrisome mental signs	
Audible respiration	Itching	Gloominess	Histrionic attitude
Inability to speak in full sentences	Oedema	Listlessness	Rejection of assistance
Shortness of breath/ tightness in the chest	Abdominal swelling	Apathy	Complaining
Use of accessory respiratory muscles	Decreased appetite	Anxiety	Self-absorption
Coughing; productive	Weight loss	Anger	Dependence
Cyanosis	Vomiting	Threatening attitude	Inhibition
Chest pain	Diarrhoea	Overstrained attitude	Compulsivity
Pale grey colour	Constipation	Desperation	Monotonous attitude
Dizziness	Stroke symptoms	Agitation	Activity
Fainting	Chills	Confusion	Regression
Bruising	Fever	Tormented attitude	Withdrawn attitude
Easily fatigued; exhausted	Cold extremities	Insensitivity	Delirium
Perspiration/clammy skin	Petechiae	Suspicion	Grogginess, sleepiness, sluggishness
Congested cervical veins	Dry skin turgor	Lack of inhibition	Forgetfulness
Increased bleeding tendency	Dark urine	Euphoria	Eccentricity
Muscle cramps	Malodorous urine	Dysphoria	
Pain	Urinary incontinence		
	Jaundice		

Table 2 Examples of worrisome somatic and mental signs.

Worrisome signs from the environment

A large amount of information can also be 'read' from the patient's immediate surroundings. Examples could include neglect of housekeeping (food scraps, unwashed dishes, odour, garbage, dirty clothes) and maintenance to the home and garden; excessive supply of a specific item and not enough of the rest (hoarding); and an environment that is stressful, too cold, too warm, unhealthy, hazardous or threatening. All of these types of signals could indicate underlying clinical problems.

2. Basic clinimetrics

Clinimetrics are observations that serve as objective measurements/findings to which numerical values can be assigned. To measure is to know. We understand basic clinimetrics as the standard measurements that provide a relatively simple way to chart the state of the vital bodily functions. These clinimetrics are described in detail in Part II of this book.

Basic clinimetrics	What do we want to see?
AVPU reaction pattern	Alert
Respiratory frequency	12–14/minute
Saturation – SpO2%	>95%
Arterial blood pressure (BP)	120/80 mmHg
Systolic pressure	110–140 mmHg
Diastolic pressure	70–85 mmHg
Average pressure (MAP)	60–90 mmHg
Pulse pressure	40–50 mmHg
Cardiac frequency	60–100/minute
Pulsations	Regular
Cardiac rhythm	Sinus rhythm
Diuresis	1 ml/kg/hour
Capillary refill time	2–3 seconds
Core temperature	36.5–37.5°C

Table 3 Basic clinimetrics.

3. Scoring systems

Scoring systems are usually extremely useful instruments for assessing and quantifying highly specific observations in a clear, methodical manner. Some apply to highly specific situations, while others are intended for more general use. Inter-professional validation is nevertheless always important. A large number of these scoring systems are described in Part II of this book.

(M)EWS Early Warning Score							
Score	**3**	**2**	**1**	**0**	**1**	**2**	**3**
Respiratory frequency	< 70	<9		9-14	15-20	21-30	>30
Cardiac frequency		<40	40-50	51-100	101-110	111-130	>130
Systolic pressure		70-80	81-100	101-120		>200	
Consciousness			😠	**A**	**V**	**P**	**U**
Temperature		<35.1	35.1-36.5	36.6-37.5	>37.5		
A = Alert **V** = Responds to verbal stimulus **P** = Responds to pain stimulus **U** = Unresponsive to verbal or pain stimulus 😠 = Acute confusion or agitation							
If saturation < 90% despite therapy: 3 points If urine production < 75 ml in the past 4 hours: 1 point If worried about the clinical state: 1 point							
> 3 POINTS INDICATES A VITALLY THREATENED PATIENT							

Figure 8 The (M)EWS score is used to determine the degree of illness based on vital signs.

A few examples of specific scoring systems:

- Numeric Rating Scale (NRS) or Visual Analogue Scale (VAS; pain score)
- (M)EWS Early Warning Signs for patients at risk of death
- (Modified) Early Obstetric Warning System ([M]EOWS)
- Glasgow Coma Scale (GCS)
- Systematic inflammatory response system (SIRS) criteria (sepsis)
- qSOFA and SOFA (sepsis prognosis)
- Delirium Observation Scale (DOS) score
- Short Nutritional Assessment Questionnaire (SNAQ) score (nutritional state)
- APGAR score (newborns)
- Paediatric Early Warning Signals (PEWS)
- Modified Aldrete score (Post Anaesthetic Care Unit/PACU discharge criteria)
- Richmond Agitation and Sedation Scale (RASS; ICU)
- Confusion Assessment Method (CAM-ICU)

4. Blood values

Blood values are the outcomes of a blood test. In a blood test, a sample of blood is taken, usually by venepuncture or finger prick, and analysed in a laboratory. The results are of important diagnostic value. Blood values are often divided into three categories: haematology, clinical chemistry and the arterial blood gas analysis. All of these blood values are described in Part II of this book.

Haematology	Reference value	Description
Haemoglobin (male)	8.5 – 11.0 mmol/L	Protein in erythrocytes, oxygen transport
Haemoglobin (female)	7.5 – 10.0 mmol/L	Protein in erythrocytes, oxygen transport
Haematocrit	0.40 – 0.50	Percentage of cells in plasma
HbA1c	< 53 mmol/mol (< 7%)	Hb saccharification
Erythrocyte count (male)	4.5 – 6.0 x 10-12/L	Red blood cells, oxygen transport
Erythrocyte count (female)	3.9 – 5.4 x 10-12/L	Red blood cells, oxygen transport
MCV	80 – 100 fl	Average cell volume of erythrocytes
Reticulocyte count	25 – 110/nl	New erythrocytes
Leukocyte count	4.0 – 10.0 x 10^9/L	White blood cells, defence function
Thrombocyte count	150 – 400 x 10^9/L	Platelets, coagulation
INR/ PT	0.8 – 1.2	Coagulation test, coumarin use
APTT	22 – 33 seconds	Coagulation test
Fibrinogen	2 – 4 g/L	Coagulation test
D-dimer	< 500 µg/L	Coagulation test
CRP	< 10 mg/L	Acute phase protein, infection parameter
BSE	< 15 mm/hour	Sedimentation rate, infection parameter
Arterial blood gases	**Reference value**	
pH	7.35 – 7.45	Acidity
pCO_2	35 – 45 mmHg	Carbon dioxide tension
Bicarbonate	22.0 – 26.0 mmol/L	Electrolyte and acid buffer
pO_2	75 – 100 mmHg	Oxygen tension
SaO_2	> 95%	Arterial oxygen saturation Hb
Clinical chemistry	**Reference value**	
Sodium	135 – 145 mmol/L	Electrolyte, positive ion
Potassium	3.6 – 5.1 mmol/L	Electrolyte, positive ion
Calcium	2.20 – 2.60 mmol/L	Electrolyte, positive ion
Chloride	98 – 108 mmol/L	Electrolyte, negative ion
Bicarbonate	22.0 – 26.0 mmol/L	Electrolyte, negative ion, acid buffer
Fasting glucose	3.0 – 6.0 mmol/L	Carbohydrate, energy source
Glucose after meal	4.0 – 10.0 mmol/L	Carbohydrate, energy source
Osmolarity	280 – 300 mOsmol/kg	Crystalline osmotic pressure
Albumin	35 – 50 g/L	Blood protein, colloidal osmotic pressure
Total protein	65 – 80 g/L	Total volume of plasma proteins
Creatinine (male)	65 – 110 µmol/L	Muscle metabolism degradation product
Creatinine (female)	50 – 100 µmol/L	Muscle metabolism degradation product
Urea	3.0 – 7.0 µmol/L	Protein metabolism degradation product
eGFR	> 90 ml/minute/1.73m2	Glomerular filtration rate
ASAT	< 40 U/L	Non-specific enzyme
ALAT	< 45 U/L	Hepatic enzyme
Gamma GT	< 50 U/L	Hepatic enzyme, bile ducts
Alkaline phosphatase	< 35 – 120 U/L	Hepatic enzyme, bile ducts, bone
Amylase	< 100 U/L	Pancreatic enzyme
LDH	< 250 U/L	Hepatic enzyme
CPK	< 200 U/L	General enzyme, non-specific
CKmb	< 10.0 µg/L	Cardiac muscle enzyme
Bilirubin	< 20 µmol/L	Bile pigment, Hb degradation product
Troponin (1 of T)	< 0.1 (I)/ < 0.3 (T) µg/L	Cardiac muscle marker
NTproBNP	< 740pg/ml	Cardiac muscle hormone
Lactate	< 2.2 mmol/L	Acid residue

Table 4 Important blood values and their reference values used in the Netherlands.

5. Detailed and specific monitoring

A patient monitor is used for the intensive and continual monitoring of patients. For example, it can be used to monitor vital signs in patients during and after surgery or in the medium care or intensive care unit, but it is increasingly being used in common care and outpatient settings as well. The patient monitor can be used to determine multiple functions and values at the same time, with their values appearing on a colour display. To obtain these vital functions, the patient is connected to the monitor by sensors and meters (e.g. a blood pressure cuff, ECG cable or SpO2 finger sensor). In an intensive care unit, the patient's blood pressure can also be monitored in an invasive manner using an 'arterial line'. The settings on the monitor are customised for each patient. The device issues an alarm if the heart rate, blood pressure or oxygen level exceeds or falls below the set value. Many of these forms of monitoring are described in Part II of this book.

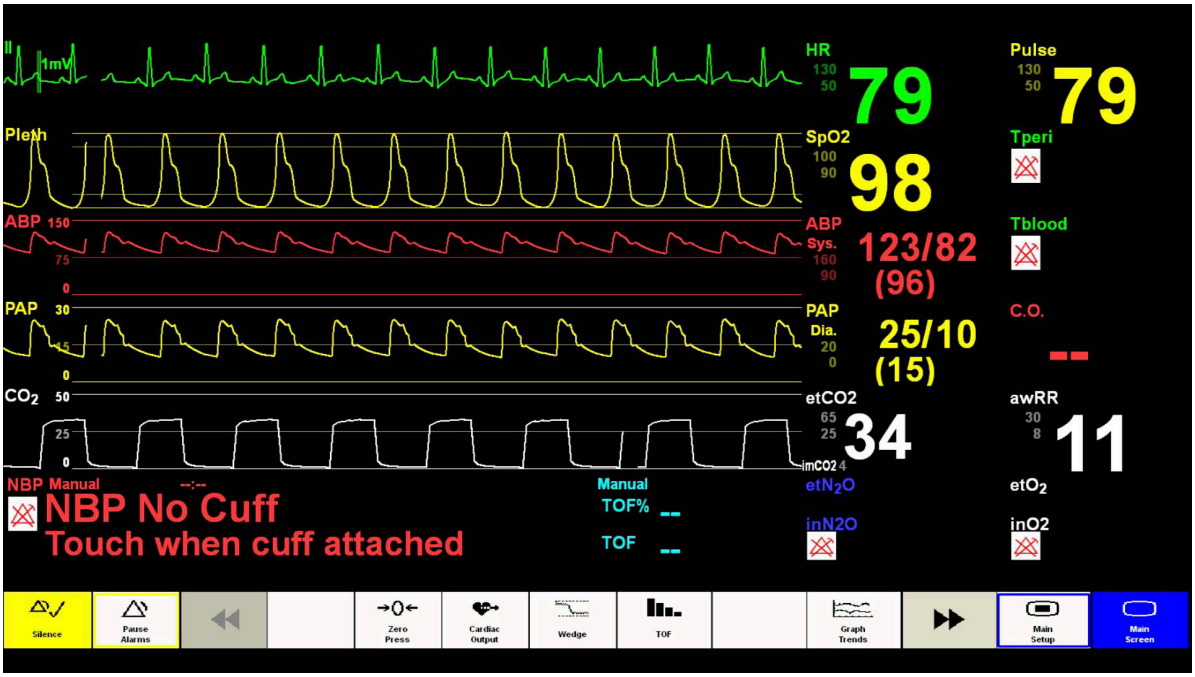


Figure 9 Detailed invasive monitoring of the vital functions: in figures and along a curve.

Some specialisations have their own specific observations. A few examples:

- neurological observations;
- dialysis observations;
- obstetric observations;
- cardiological observations (cardiac rhythm monitoring);
- haemodynamic profiles (invasive blood pressures, ICU);
- ventilation parameters (ICU);
- NIDCAP parameters (NICU).

4.2 Analysis

Nurses are expected to be able to analyse:

- what is going well, what is at risk and what is not going well with regard to the ICF healthcare topics and/or the ABCDE vital functions;
- any clinical problems (disorders, dysfunctions, disabilities, participation problems and interactions).

Seeing a problem is the first step towards resolving it. For patient problems, although it is tempting to start considering possible solutions immediately, it is much better to start by considering the problem itself. What is actually happening? Which interactions can be observed? Suitable, patient-centred solutions cannot be proposed until after a thorough problem analysis.

Problem overview

The International Classification of Functions (ICF) developed by the WHO is used to provide clear insight into the clinical state of patients. The ABCDE method is used for patients who are at risk of death. The bodily functions are listed in the ABCDE order in figure 10. Taken together, it forms a dashboard for the clinical state of the patient in question. What is going well, what is not going well and what is in danger? Where are the clinical problems, disorders and disabilities situated? How are the problems interacting favourably or unfavourably with each other?

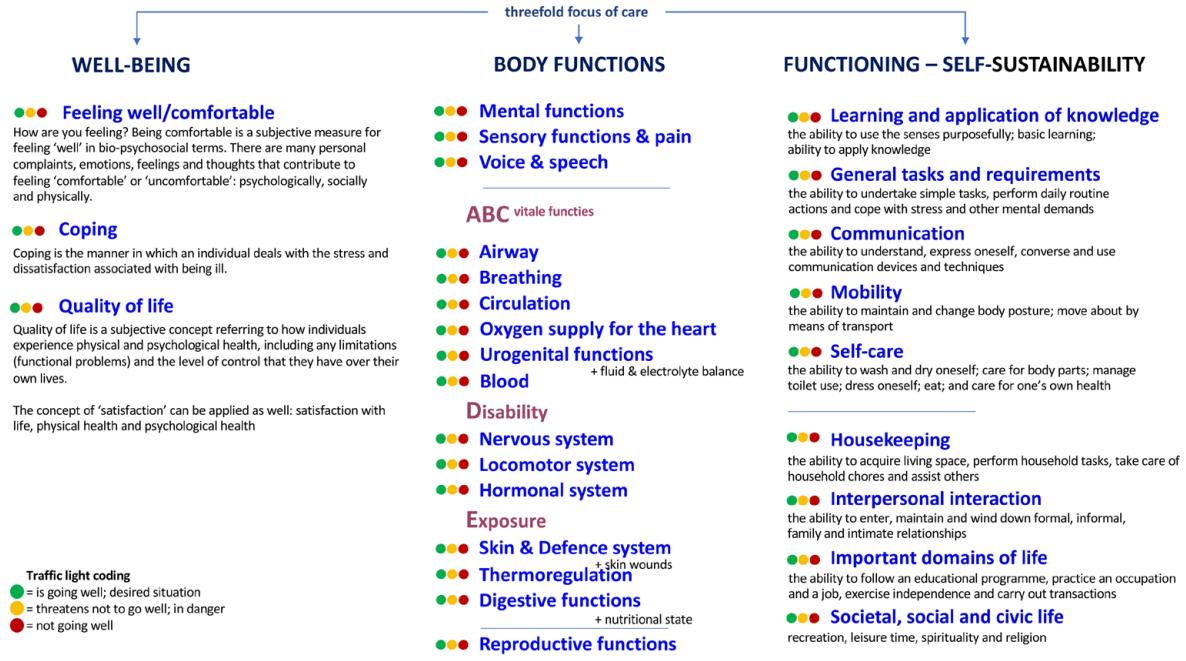


Figure 10 The clinical state dashboard; the traffic light system provides a simple way to create an overview of problems.

Threefold focus of care

The clinical state dashboard is divided into the three focal points of patient-centred care: well-being, bodily functions and patient functioning. We refer to this as the 'threefold focus of care'. The specific healthcare topics are listed beneath each column. All of these healthcare topics are obviously not independent. A large amount of interdependence is involved in proper functioning, as well as in dysfunctions (interactions) within these healthcare topics.

Interactions

A proper, thorough analysis can sometimes provide surprising insights into the interrelatedness of the problems, disorders, dysfunctions, limitations and participation problems. Such insight can ultimately lead to care that is customised to specific individuals. Interactions can be either favourable (compensation mechanisms) or unfavourable (problem-reinforcing). The interactions are often dynamic, specific, and not always in a predictable one-to-one relationship. Interactions can take place in all directions (cross-links). The clinical problems that are present should therefore be analysed within the context of their inter-relationships whenever possible, as well as with regard to their potentially favourable or unfavourable effects.

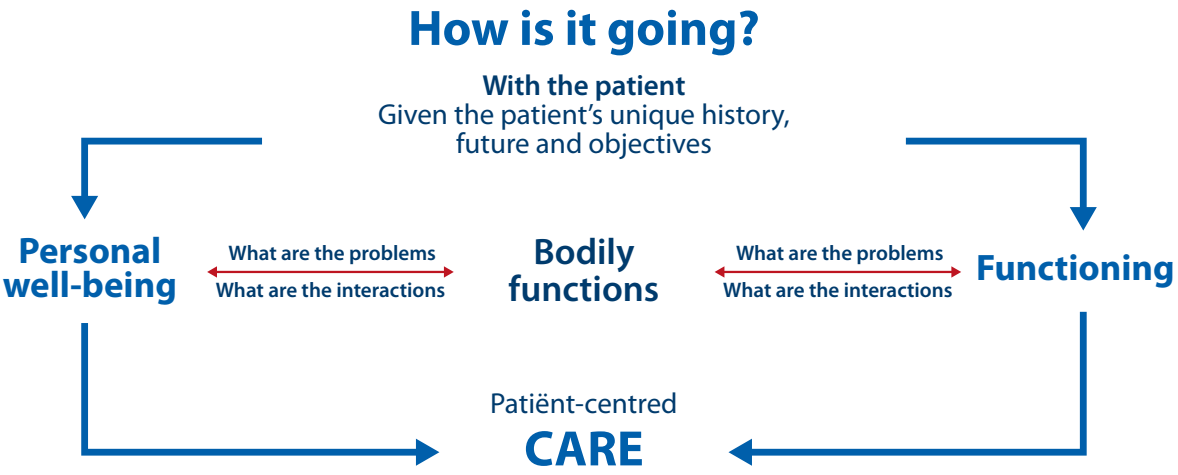


Figure 11 The three focal points in healthcare together form a trinity, and they should be approached as such. A clinical problem within a given healthcare topic will eventually have an effect on another problem. Insight into the mutual interactions is of major importance to patient-centred care.

The following apply in practice:
• Use the ICF healthcare topics to create an overview. This is done by reviewing all of the healthcare topics and indicating where problems can be observed (or predicted). • Thereafter, formulate what the problem, disorder, functional problem or disability is. • Carefully consider the picture as a whole and any mutual interactions amongst the problems. • Make a note of your findings.

What is the problem?

It is not enough simply to state what is going well and what is at risk or not going well. Nurses are expected to be able to provide insight into the problem. In other words, they should be able to provide a clear, concise formulation of 'what' the problem or danger is.

The patient problems associated with these healthcare topics can be formulated in several different ways. The goal is to arrive at a short, concise statement of the problem. It should be able to be understood by others. Avoid jargon and a multitude of unnecessary abbreviations. The inventory and

formulation should ideally be based on available knowledge. This book can also be consulted for inspiration. In Part II of this book, all of the ICF healthcare topics are accompanied by descriptions of a large number of problems, disorders, dysfunctions, disabilities and diseases that could be helpful in the process.

The following sources could also be used:
- Carpenito's *Handbook of Nursing Diagnosis*. One disadvantage of this resource is that the diagnoses are arranged alphabetically and not according to healthcare topic. Another disadvantage is that the diagnoses are not formulated in an inter-professional manner.
- Nationale Kernset Patiëntproblemen [National Core Set of Patient Problems] (in Dutch).[3]

4.3 Communication

Nurses are expected to demonstrate clinical leadership and to:
- share their findings in a timely manner with the relevant physician, other nurses and the patient;
- inform those involved with regard to the patient's clinical state, complaints and problems (using the SBAR method);
- engage in proactive, patient-centred thinking with regard to the actions and care that are needed for specific patients and situations.

In daily practice, nurses regularly engage in consultation concerning the clinical state of the patient. Clinical consultation can take many forms. It can take place by telephone (particularly during emergencies) or in a variety of other contexts (e.g. grand rounds, shift change, multidisciplinary consultation, emergency intervention team calls). The patient is the focus for all of these forms of inter-professional clinical consultation. The goal of clinical consultation is to make clear agreements concerning the patient's care.

Inform and inspire each other

Think carefully in advance. Good communication also involves thinking carefully about who, when and where, as well as how to provide others with concise, concrete and respectful information about 'how it's going with the patient' and 'what the problem is (or might be)'. In acute situations, inter-professional clinical consultation in acute situations is often conducted in the form of the SBAR method (situation, background, assessment, recommendation). Consultation moments often proceed much more clearly, pleasantly and efficiently when both the sender and receiver are familiar with the situation.

Think together proactively

As nurses, we are often close to the patient, and we are therefore in an ideal position to monitor the clinical state, to engage in problem-centred thinking and to participate actively in the care that is appropriate for the patient in question. Your clinical judgement and clinical leadership are at the very heart of our nursing profession: providing patient-centred care. Nurses act as 'advocates' for patients, particularly in situations in which they are temporarily or permanently incapable of indicating what is or is not going well. Nurses actively consider what is best for their patients. They apply empathic ability, professional knowledge, professional and life experience, and clinical leadership in the interest of the patient.

3 The Nationale Kernset Patientproblemen [National Core Set of Patient Problems] is intended to provide a single language within the nursing and healthcare sectors in the Netherlands. This core set consists of patient problems, interventions, healthcare results, observations and measurement tools. It is available (in Dutch) at www.nictiz.nl.

The following applies in practice:

- Consider what you would like to discuss with whom, when and where.
- Consider whether this discussion can take place by telephone (particularly during emergencies) or in any of a variety of other contexts (e.g. grand rounds, shift change, multidisciplinary consultation, emergency intervention team calls).
- Inform other healthcare professionals using the SBAR method.
- Think together. Ask concrete questions and make concrete proposals.
- Document the consultation and any agreements that have been made.

Five categories of recommendation

The fact that you have identified problems in a patient does not mean that you must or can solve all of these problems personally. Thinking together with others also involves the ability to propose the expertise of other healthcare professionals. For purposes of inspiration, the proposals—recommendations—that can be made are divided into five categories: supplementary testing, interventions, consultation, counselling and relating to self-reliance.

1. Think together and make recommendations relating to supplementary testing

Examples could include:

- asking supplementary medical history questions (e.g. based on ALTIS, SCEBS or AMPLE);
- performing physical examination/observation (e.g. looking, measuring, listening, feeling the head, neck, thorax, abdomen, back or extremities);
- maintaining specific scoring lists (e.g. SNAQ, DOS, Lastmeter, ADL, EMV, Ramsey);
- laboratory tests (e.g. blood, sputum, cerebrospinal fluid, mucus, faeces, urine, wounds);
- imaging tests (e.g. X-ray, ultrasound, CT scan);
- physical-diagnostic tests (e.g. ECG, EEG, endoscopy, Doppler, scans).

2. Think together and make recommendations relating to interventions

Indicate the specific form of intervention and whether the action in question should be started, stopped, adjusted or continued.

Examples could include:

- airway management/resuscitation techniques;
- ventilation;
- oxygen therapy;
- intravenous therapy;
- pharmacotherapy;
- pain medication or pain treatment;
- posture/position;
- catheters/tubes/drains;
- nutrition/diet/fluid policy;
- wound policy/bandages;
- bed sores policy;
- mobilisation (or immobilisation) policy with/without assistive devices;
- heat/cold management;
- insulation/barrier/reverse insulation;
- blood products (erythrocytes/plasma/thrombocytes);
- renal function replacement therapy;
- extensive controls every ... minutes or every ... hours;
- admission/transfer/discharge;
- sedation or palliative sedation;
- psychotherapy;
- other.

3. Think together and make recommendations relating to consultation with other healthcare professionals

Examples could include:

- physician, medical specialist;
- rapid response team;
- pain team;
- nursing specialist;
- specialised nurse;
- medical social worker;
- midwife;
- lactation consultant;
- physiotherapist;
- occupational therapist;
- dietician;
- hygienist;
- educational specialist;
- interpreter;
- spiritual advisor (e.g. pastor, imam, counsellor, priest, rabbi);
- other.

4. Think together and make recommendations relating to well-being

Examples could include:

- psychosocial guidance/empathic support;
- medication;
- tender loving care (TLC);
- other.

5. Think together and make proposals relating to self-reliance and functioning

Examples could include:

- information/advice/instructions;
- encouragement (e.g. by making recommendations, indicating, giving advice);
- support (e.g. through treatment, techniques, therapy, assistive devices, pain medication);
- involving informal carers;
- other.

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Documents

- Beroepsprofiel HBO opgeleide verpleegkundige 'regie en overzicht' [Job profile for nurses with a higher professional degree: 'Direction and oversight'] (www.venevn.nl).
- Beroepsprofiel MBO opgeleide verpleegkundige 'een sterke combinatie van hoofd, handen en hart' [Job profile for nurses with a senior vocational degree: 'A strong combination of head, hands and heart'] (www.venevn.nl).
- Beroepsopleidingsprofiel Bachelor of Nursing 2020 een toekomstbestendig opleidingsprofiel 4.0 [2020 Job-training profile for Bachelor's degree programmes in Nursing: An educational profile for the future 4.0].
- Beroepscode van Verpleegkundigen en Verzorgenden [Job code for Nurses and Care Providers]. Leidraad voor je handelen als professional [Guide for acting as a professional].
- Monitor Zorggerelateerd Schade [Monitor of care-related damages] 2015, 2019.

International Classification of Functioning, Disability and Health

The titles, terminology and substantive information used in this book are applied largely in accordance with the ICF, the Dutch translation of the International Classification of Functioning, Disability and Health. Bilthoven: WHO-FIC Collaborating Centre/RIVM.

Internet

In addition to literature, we made frequent and grateful use of the internet. Despite many reservations concerning the reliability of the information, when used critically, the internet has time and again proven to be a fantastic, inexhaustible source of information. Google and Wikipedia were particularly indispensable in the preparation of this book. Despite copyrights, it will not be long before the contents of this book appear on the internet, thereby closing the circle.

The Time-out practice model was developed based on:

Problem-based training, Experiential learning, Reflection, Korthagen, 70-20-10, Entrustable Professional Activity (EPA)-based education, Inter-professional Education (IPE), Team-based learning (TBL), The will to know, Socratic dialogue, Social constructivism, Self-determination theory (SDT), Beroepscode Verpleegkundigen [Code of Conduct for Nurses], Beroepsopleidingsprofiel verpleegkundigen [Job-training profile for nurses] and Notes on Nursing by Florence Nightingale.

PART II

INSIGHT INTO CLINICAL PROBLEMS

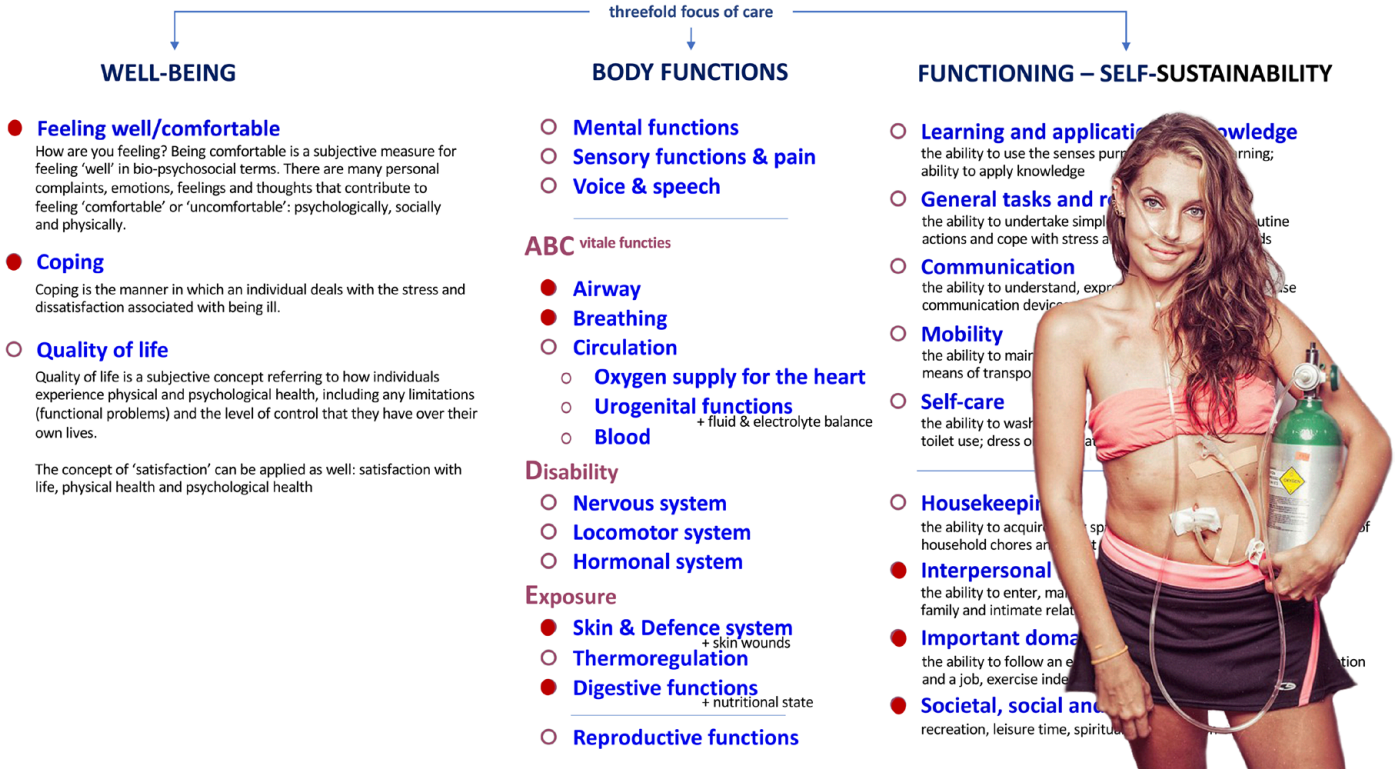
TABLE OF CONTENTS PART II

INSIGHT INTO CLINICAL PROBLEMS

Clinical problems constitute the whole of mental, social and/or physical dysfunctions, disabilities, interactions, complications, discomforts and hardships that a patient may experience, be required to learn to live with and/or might potentially die from. Clinical problems can emerge from a disease/condition, as well as from the associated medical policy or the individual person.

Insight into problems: a basic professional skill

The ability to properly identify and analyse a patient's clinical problems is an important basic professional skill for nurses. The International Classification of Functions (ICF) developed by the World Health Organisation (WHO) is used to provide clear insight into the clinical problems of patients. The ABCDE method is used for patients who are in vital danger. The bodily functions are listed in the ABCDE order in the figure below. Taken together, it forms a dashboard for the clinical state of the patient. What is going well, what is not going well and what is at risk? Where can the problems, disorders and disabilities be predicted? How are the problems interacting favourably or unfavourably with each other?



Dashboard of the clinical state of Kim (25). This example provides an overview of Kim's clinical problems. The healthcare topics with red dots are those that she sees as problematic areas in her life with cystic fibrosis, the PEG tube and the oxygen tank.

International Classification of Functions (ICF)

The International Classification of Functioning, Disability and Health (ICF) is an inter-professional classification that makes it possible to describe human functioning and any problems that people may experience in this regard. The ICF is accepted in 192 countries, including the Netherlands. It is managed by the World Health Organization (WHO). The ICF provides an international, inter-professional classification and standard language for describing an individual's functioning from three different perspectives:

1. *The human being as an organism*: for describing the bodily functions, anatomical characteristics and disorders of the various parts of the body.
2. *Human functioning*: for describing what individuals do or can (still) do themselves, which activities they perform and which limitations they encounter in doing so.
3. *Participation*: for describing whether individuals are able to participate in all areas of social life, their actual participation and any problems that they encounter in this regard.

A few concepts for use with the ICF:

- **Functions**: physiological and mental characteristics of the human organism.
- **Disorders**: clinical problems in the form of abnormalities in or loss of functions and anatomical characteristics.
- **Disabilities**: difficulties that an individual has with regard to functioning and performing activities.
- **Participation problem**: a problem with an individual's functioning or participation in social life.

ProActive Nursing uses the ICF as a guide for clinical judgement aimed at obtaining insight into the clinical state and problems of our patients. The following dashboard is based on the ICF classification. Several bodily functions are presented in the order of the ABCDE method.

Threefold focus of care

The dashboard is divided into the three focal points of care: well-being, bodily functions and patient functioning. We refer to this as the 'threefold focus of care'. The specific healthcare topics are listed beneath each column. All of these ICF healthcare topics are obviously not independent. A large amount of interdependence is involved in proper functioning, as well as in dysfunctions (interactions) within these healthcare topics. In vulnerable people with disruptions, well-being, bodily functions and functioning will eventually become compromised. Diseases, conditions and/or injuries, whether acute or chronic, usually have many negative consequences. It is of critical importance for both caregivers and patients to see 'how', 'where', 'when' and 'why' these problems, dysfunctions, disorders and impairments may occur. Only then can they be prevented or approached from a patient-centred perspective.

18 HEALTHCARE TOPICS

In Part II of this book, the eighteen healthcare topics are described: what they entail and what the Clinical focus points or problem areas are.

WELL-BEING

Healthcare topic 1

Well-being refers to the extent to which an individual feels well mentally, physically and socially. In addition to feeling good about oneself, well-being involves being healthy and satisfied with one's life. Well-being is the personal, subjective measure of the quality of life.

Clinical focus points:

1. feeling well/comfortable;
2. coping;
3. quality of life.

MENTAL FUNCTIONS

Healthcare topic 2

The mental functions are located in the brain. They include general mental functions (e.g. consciousness, sleep, energy and drives), as well as specific mental functions (e.g. memory, language, arithmetic and higher cognitive functions).

Clinical focus points:

1. general mental functions;
2. specific mental functions.

SENSORY FUNCTIONS AND PAIN

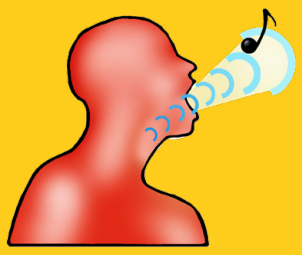
Healthcare topic 3

The sensory functions exist for the purpose of registering a wide range of stimuli in the environment. If they are strong enough, these stimuli proceed to the nervous system, where they are processed and assigned meaning. The sensory organs, nervous system and muscles thus cooperate to ensure proper control, movement or communication.

Clinical focus points:

1. sensory functions;
2. pain.

VOICE AND SPEECH



Healthcare topic 4

The voice is the sound that is made with the vocal folds. Inhaled air flowing into the throat first passes the larynx, with the vocal folds. The air moves through the larynx and makes the vocal folds vibrate. This results in sound, making it possible to speak and sing. What and how something is said or sung is captured with the sense of hearing. The voice could also be regarded as the 'transport vessel of the mind'.

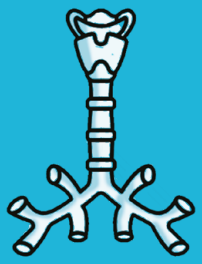
Clinical focus points:

1. speech production;
2. speech muscles;
3. larynx;
4. vocal usage;
5. speech perception.

ABC vital functions

The ABC vital functions consist of the primary life functions, including the following: airways, breathing and circulation. Secondarily, it also involves the oxygen supply to the heart, the urogenital functions (including the fluid and electrolyte balance) and the blood.

RESPIRATORY TRACT



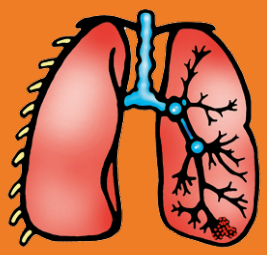
Healthcare topic 5

The respiratory tract is the continuously open connection between the external air and the alveoli. Inhaled air flows in and out through the upper respiratory tract: the nasal cavity or the oral cavity, the pharynx, the larynx and the trachea. The trachea splits into the lower respiratory tract: the main bronchi, many smaller bronchi and the bronchioli. These structures transport air from and to the alveoli.

Clinical focus points:

1. upper respiratory tract;
2. lower respiratory tract.

RESPIRATION



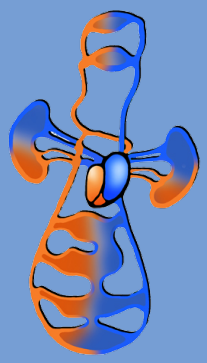
Healthcare topic 6

Breathing is the active inhalation and passive exhalation of air through the working of muscles. Oxygen is taken up as required by the metabolism, and the carbon dioxide that has been produced is excreted. Respiration adapts continuously to three variables: the activity factor, the stress factor (infection, trauma, disease) and body temperature.

Clinical focus points:

1. respiratory stimulus;
2. respiratory activity;
3. gas exchange;
4. pulmonary blood supply.

CIRCULATION



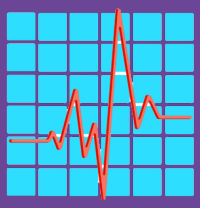
Healthcare topic 7

Circulation is the active pumping and distribution of blood through the work of the cardiac muscles. It consists of the heart and an extremely dense network of blood vessels, venules and major veins. The left heart pumps blood through the aorta, arteries and arterioles towards the capillary networks of the organs, providing the cells with food and oxygen, in addition to transporting waste (e.g. carbon dioxide) as venous return through the right heart and to the lungs.

Clinical focus points:

1. venous supply;
2. cardiac rhythm;
3. pump function;
4. arterial vascular system;
5. microcirculation.

OXYGEN SUPPLY TO THE HEART



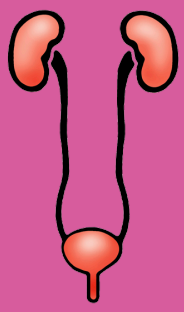
Healthcare topic 8

The cardiac muscle continuously needs a large amount of oxygen in order to perform. The supply of oxygen and the amount of oxygen that the cardiac muscle (myocardium) needs must therefore be constantly in balance. The blood supply to the myocardium is provided by the three major coronary arteries: 1) LAD, 2) RCA and 3) LCX.

Clinical focus points:

1. oxygen supply;
2. demand for oxygen.

URINARY SYSTEM



Healthcare topic 9

The body has a continual need for water, along with the substances that are dissolved in it (e.g. electrolytes). The body is composed predominantly of water, which must constantly be refreshed. The body's water-salt balance is intended to maintain a constant level in the total volume of water, the total volume of electrolytes and the ratio between them.

Clinical focus points:

1. intake and requirement;
2. osmolarity;
3. total water mass;
4. renal functions;
5. micturition.

BLOOD

Healthcare topic 10

Blood is a liquid organ that is found everywhere in the body and that serves a particularly important function in transporting oxygen, nutritional substances, hormones, carbon dioxide, heat and other substances. Blood consists of two main components: water and cells.

Clinical focus points:

1. blood volume;
2. acid-base balance;
3. oxygen transport;
4. coagulation;
5. blood values.

Disability functions

NERVOUS SYSTEM

Healthcare topic 11

The nervous system has a coordinating role in the processing of external and internal sensory stimuli, as well as in the general and specific mental processes, the control of the skeletal muscles, the coordination of movement and the control of the internal organs.

Clinical focus points:

1. central nervous system;
2. peripheral nervous system.

MUSCULOSKELETAL SYSTEM

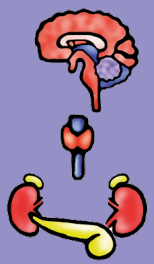
Healthcare topic 12

The locomotor system is the entirety of bones, joints, muscles and tendons. The skeletal muscles are controlled by the nervous system through peripheral nerves. With regard to movement, a distinction is made between voluntary movement and reflexive movement.

Clinical focus points:

1. neuromuscular control;
2. skeletal muscles;
3. bones, tendons and joints;
4. motor functions.

ENDOCRINE SYSTEM



Healthcare topic 13

Hormones are chemical substances that have widespread effects on organs and tissues. For example, they can either stimulate or inhibit organ function. Hormones are transported by the blood and broken down in the liver and/or excreted in the urine. They play a major role in the long-term and slow maintenance of homeostasis.

Clinical focus points:

1. central regulation;
2. lower endocrine organs;
3. target organs.

Exposure functions

THERMOREGULATION

Healthcare topic 14

Maintaining a constant body temperature is of vital importance. In the metabolic process, the production of energy results in the release of a large amount of heat into the body cells, and this heat must subsequently be dissipated. A wide range of bodily processes (e.g. enzyme processes, coagulation, oxygen binding, muscle contraction) are optimised at a temperature of 37°C.

Clinical focus points:

1. heat production;
2. heat release.

SKIN AND IMMUNE SYSTEM

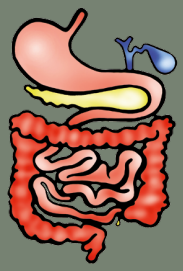
Healthcare topic 15

The immune system is the body's defence system, which is intended to fight invaders, as well as the body's own cells if they have been altered (e.g. cancer cells). The skin and mucous membranes (mucosa) form physical barriers against pathogenic micro-organisms. These pathogens contain antigens, which can be recognised by leukocytes, which can subsequently disable pathogens.

Clinical focus points:

1. skin and mucous membranes (1st line);
2. innate immune system (2nd line);
3. adaptive immune system (3rd line).

DIGESTION



Healthcare topic 16

Digestion is a complex process that starts in the mouth and ends in the rectum. The duration of digestion varies from 24 to 72 hours, depending on what has been eaten. During digestion, food is converted into carbohydrates, proteins and fats. The other substances that remain are broken down and eliminated.

Clinical focus points:

1. intake and requirement;
2. breakdown and digestion;
3. transport;
4. absorption;
5. processing;
6. defaecation.

REPRODUCTION

Healthcare topic 17

The reproductive system consists of the genital organs and the reproductive hormones, which cooperate for purposes of reproduction. Sexual intercourse between a man and a woman can result in the fertilisation of an egg cell, which can subsequently result in a pregnancy. After a full-term pregnancy of approximately 40 weeks, the mother and the child are ready for childbirth.

Clinical focus points:

1. sexuality;
2. becoming pregnant;
3. pregnancy;
4. childbirth;
5. recovery.

FUNCTIONING > ACTIVITIES AND PARTICIPATION

Healthcare topic 18

'Activities and participation' provide a reflection of functioning in daily life. Activities are elements of a person's actions, and participation consists of taking part in life within society. Self-reliance literally means 'the ability to rely on oneself' in daily life. There are nine categories of human functioning.

Clinical categories:

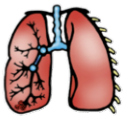
1. learning and the application of knowledge;
2. general tasks and requirements;
3. communication;
4. mobility;
5. self-care;
6. housekeeping;
7. interpersonal interactions and relationships;
8. important domains of life;
9. societal, social and civic life.

MIND MAPS

Mind maps containing the appropriate clinical focus points have been created for each of the ICF/ABCDE healthcare topics. These maps can be used to help provide insight into clinical problems.

Mind maps

The mind maps are actually summaries of clinical knowledge concerning the relevant healthcare topics. A mind map is constructed of the clinical focus points that reflect each of the main points. These clinical focus points should be regarded as checkpoints in determining 'how it's going' with the patient with regard to a specific healthcare topic. The clinical focus points are numbered and presented from top to bottom in a specific physiological order. Important comments on that specific point of interest are presented to the right. The mind maps do not provide any exact choices, answers or ready-made diagnoses. It is always necessary to be able to understand the problem and articulate it well, using the correct terminology. This requires a lot of practise and mental energy. Do not be discouraged. People learn by doing.

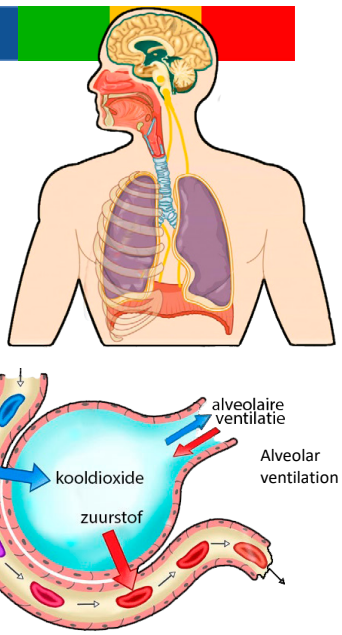


Respiration

Breathing is the active inhalation and passive exhalation of air through muscle activity. Oxygen is taken up to the needs of the metabolism, and the carbon dioxide that has been produced is excreted. Respiration adapts continuously to three variables: the activity factor, the stress factor (infection, trauma, disease) and body temperature.

How is it going → *what is going well, what is at risk and what is not going well?*

1. Respiratory stimulus	Brainstem Medulla oblongata Phrenic nerve	→ Sensitive to pCO_2 - pH - pO_2 and emotions → Regulates respiratory frequency and depth → The spinal cord nerve (C2–C4) controls the diaphragm
2. Respiratory activity	Diaphragm Intercostal muscles Accessory respiration	→ Accounts for 70% of alveolar ventilation → Increases alveolar ventilation during exertion → Increases alveolar ventilation during respiratory distress
3. Gas exchange	Alveolocapillary membrane	→ Diffusion of CO_2 > from blood to alveoli → Diffusion of O_2 > from alveoli to blood
4. Pulmonary blood supply	Pulmonary circulation Ventilation-perfusion V/Q mismatch	→ Heart > blood through lungs to left heart → V/Q ratio = 1:1 > saturation >95% → Shunting or dead space ventilation



Alveolar gas exchange
Diffusion > CO_2 first *out of* blood and then O_2 *into* blood

The mind map is a tool for assessing 'how it's going' in terms of respiration. The four clinical focus points for respiration are displayed on the far left. The relevant blocks contain further important details, and the grey blocks explain why these details are so important.

Chapter 1 Clinical focus points

In Chapter 1, the mind map is used to explain the physiological issues relating to 'respiration', as well as how they operate (or how they are supposed to operate). In this case, the issues are as follows:

1. Respiratory stimulus
2. Respiratory activity
3. Gas exchange
4. Perfusion

Chapter 2 Clinical problems

This chapter provides an inventory of possible clinical problem situations associated with respiration. The problem is ordered according to the six Clinical focus points of the mind map. Note: The issues are merely overviews of problems, disorders, dysfunctions and/or disabilities. These lists can never be exhaustive. The possible causes (aetiology) of these clinical problem situations or dysfunctions are presented as much as possible.

Chapter 3 Clinical observations

Chapter 3 provides an overview of clinical observations—signals that are relevant to diagnosing the situation (in this case, with regard to respiration). For a few healthcare topics (e.g. respiration), specific parameters are highlighted. In the case of respiration, this applies to saturation.

Chapter 4 A few clinical situations

Chapter 4 contains examples of commonly occurring and/or relevant situations with severe dysfunctions (in this case, with regard to respiration).

HEALTHCARE TOPIC 1

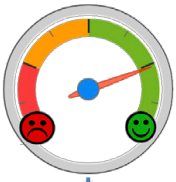
WELL-BEING

HEALTHCARE TOPIC 1
WELL-BEING

Personal Well-being

Well-being refers to the extent to which an individual feels mentally, physically and socially well, fine, pleasant or comfortable. In addition to feeling good about oneself, well-being involves being healthy and satisfied with one's life. Well-being is also a personal, subjective measure of the quality of life.

How is it going → *what is going well, what is at risk and what is not going well?*



1. Feeling well/comfortable

A number of important aspects of 'feeling well, fine, pleasant or comfortable':

- **Absence of complaints:** no pain, cramping, itch, chills, hunger, thirst, shortness of breath, dizziness, nausea etc.
- **Security:** feeling secure, safe, welcome
- **Eating/drinking:** feeling satisfied, satiated; savouring food
- **Personal hygiene:** feeling clean, dry and content
- **Mobility:** able to move and get around smoothly
- **Rest/sleep:** feeling well-rested, fit, energetic
- **Mood:** feeling happy, cheerful, not stressed
- **Cognitive:** clear-minded, not confused; feeling heard and understood
- **Company:** not feeling lonely; experiencing friendship; having contact; experiencing family ties
- **Identity:** being able to express who one is: gender, spirituality, culture
- **Treatment:** dignified, respectful, equal
- **Intimacy:** able to share one's deepest thoughts and feelings
- **Autonomy:** being in control, independent and self-sufficient

2. Coping

Coping is the manner in which individuals manage situations, problems, events, thoughts and feelings. There is no right or wrong manner of coping. People often apply a combination of coping styles.
Coping styles: 1. active problem solving; 2. seeking social support; 3. avoidance and passive expectancy; 4. palliative/distractive responses; 5. depressive reaction patterns; 6. expressing emotions; 7. wishful thinking and comforting cognitions.

3. Quality of life

Quality of life is a subjective concept. It concerns how people experience their physical, psychological and social functioning. It may also include objective aspects (e.g. the limitations experienced as a result of illness).
'Satisfaction' is an indicator of the quality of life. It consists of three components: satisfaction with life, satisfaction with physical health and satisfaction with psychological health.
Other commonly used indicators of the quality of life include the perception of health and disabilities (functional problems) and control over one's own life.

This mind map provides insight into the healthcare topic of 'the personal well-being of the patient'.

Well-being literally means 'feeling good, well or comfortable'. Well-being refers to the extent to which an individual feels well mentally and socially. In addition to 'feeling good about oneself', well-being involves the perception of feeling healthy and satisfied with life. Good or poor well-being can be of major influence on the quality of a person's life.

1 CLINICAL FOCUS POINTS

Patients regard personal well-being as an important entity. People want to feel good, to experience no health complaints or discomforts and to be satisfied with life, there is nothing wrong with that. Everyone wants to feel good, including sick and vulnerable people and those who cannot express themselves in these terms.

In practice, however, different terminology is often used for the concept of well-being. Patients do this as well. A patient would never say, 'I am experiencing such negative well-being today.' Patients use very different terms than healthcare professionals do to describe these kinds of feelings and experiences. Sincere interest, good observation, empathy and good interviewing techniques are helpful in this regard.

Well-being as a focus of care

Healthcare professionals obviously regard well-being as an important focus of care as well. In professional practice and in the workplace, however, the concept of 'well-being' (as terminology) is not in common usage as such. In recent years, however, awareness and attention have been increasing with regard to this concept as a focus of care in its own right.

1. Feeling well or comfortable

Exactly what constitutes well-being is difficult to define, and differs from one person to another. What is clear is that illness usually has a major negative impact on well-being. Illness (whether acute or chronic) and, in some cases, the treatment that is associated with it (which can sometimes be painful) can pose a severe disruption to personal well-being. It is not only physical discomforts (e.g. pain, shortness of breath, hunger, thirst, nausea) that play a role in whether or not an individual 'feels well', but this is also influenced by mental aspects. How do people cope with illness, prognoses and treatment? What do they worry about?

In practice, well-being, welfare and 'being comfortable' are often used synonymously. When people say that they 'feel good' or that they are 'fit as a fiddle', they are usually referring to their personal well-being.

How can we see how someone is feeling? Although it can sometimes be obvious, this is not always the case. In daily practice, it can often seem as if we are able to see at a glance how things are going with patients. Are they feeling well, or not? Some patients might express complaints, thereby indicating that things are not going so well. A patient's state of mind is often reflected in facial expressions and body posture.

It's not always so clear, however, and it is sometimes necessary to rely only on a certain feeling or impression about the patient's well-being. Some patients prefer to conceal their misery or the fact that they are feeling bad, possibly in order to appear tough or to avoid complaining. A sense of well-being is highly personal and complex, which can be even more complex in times of (severe) illness. These are feelings that everyone can recognise.

'Well-being' is regarded as an all-encompassing term for everything related to another, also difficult to define, concept: quality of life. Although the term 'well-being' may sound somewhat strange, care and attention to well-being have always been highly important to healthcare professionals. There has obviously always been great concern and respect for the well-being of people who are vulnerable, ill, pregnant, newborn, lonely, traumatised, exhausted, injured, manic, drugged, in mortal danger and/or dying, and those who have recently undergone surgery.

An individual's well-being is obviously highly personal. One person's experience of 'feeling well' is not the same as that of someone else. This also applies to the opposite: when does someone not feel well/comfortable? Nevertheless, it is possible to identify several general factors that contribute to a patient's well-being. Below a list of positive factors can be found.

What makes people feel 'well' or 'comfortable'?

People often have a complex mix of experiences and feelings. Emotions and feelings can also shift rapidly, consider the proverbial 'emotional roller coaster'. The following list provides an overview of factors that make a positive contribution to the sense of well-being. Many other, less general factors are obviously conceivable. The list is intended to help interpret the concept of well-being.

- **Symptom free** not feeling sick, short of breath, not experiencing pain, itching, cramping, not feeling dizzy or nauseous
- **Safety** to feel cared for, to feel welcome
- **Eating and drinking** feeling satisfied, eating with taste
- **Personal hygiene** to feel clean, dry and continent
- **Mobility** being able to move smoothly and without pain
- **Rest and sleep** to feel well rested, to feel fit and energetic
- **Mood** feeling happy, cheerful and not stressed
- **Cognitive functions** a clear mind, to feel acknowledged
- **Companionship** not feeling lonely, having family ties, experiencing friendship
- **Identity** being able to fully express who one is (gender, spiritual and cultural)
- **Treatment** being treated with dignity, respect, equal treatment
- **Intimacy** able to share deepest thoughts and feelings
- **Autonomy** being in control, independent and self-reliant

Table 1.1 Factors that make a positive contribution to the sense of well-being.

The list is definitely not complete, nor does it focus on any particular individuals or groups of individuals. The factors that are mentioned are also not arranged in any order, none of them is more important than the others. Most of these items are self-explanatory. There is also an opposite list of factors that make people feel 'not well' (i.e. 'uncomfortable') and experience stress (see the next chapter).

2. Coping: the ability to deal with problems

Coping is the manner in which an individual deals with the stress and discomfort associated with illness. Stressful situations are usually handled in three steps:
Step 1: Identifying the problem.
Step 2: Assessing the problem. How severe is it?
Step 3: Reacting to the problem (i.e. coping). How is it being dealt with?

Developing a way in which to deal with the state of illness

Most people develop a preference for one or more styles from a very young age. For example, children have different ways of coping with boredom. Some may cry, others may go to sleep and yet

others may start looking for something interesting. Depending on their effects, children will use these strategies more often or not at all. The reactions of people in the immediate surroundings play an important role in this regard. As they mature, children develop their own ways of coping with stressful situations.

Coping mechanisms

Coping mechanisms can be described in a variety of ways. One instrument that is in common use in the Netherlands is the 'Utrecht Coping List', which describes seven coping styles. Some of these mechanisms are regarded as less appropriate ways of coping with stress; they are used primarily by people with more emotionally oriented coping strategies. This classification can be used to determine how patients and their relatives are reacting to stressful situations and what types of support would be appropriate.

1. Active problem solving

People who adopt this mechanism approach problems head-on. They go on the offensive and are highly rational in this regard. They break the problem down into pieces and seek a solution for each piece. This is one of the most effective coping styles.

2. Seeking social support

People who adopt this mechanism seek comfort, a listening ear, understanding and support from others. They would like to work with others to conceive of different ways of resolving the problem. This is one of the most effective coping styles.

3. Avoidance and passive expectancy

People who adopt this mechanism run away from the problem mentally. Instead of addressing the problem, they avoid or deny it. If this does not work, they adopt a wait-and-see attitude with regard to the consequences.

4. Palliative/distractive responses

People who adopt this mechanism run away from the problem emotionally. They focus on other things in the attempt not to think about the problem. If this does not work, they may seek refuge in nicotine, drugs and alcohol abuse.

5. Depressive reaction patterns

People who adopt this mechanism are overwhelmed by the problem, and they are incapable of resolving it. These people worry, doubt themselves, blame themselves and may become depressed. This passive coping style is not effective; the problem is not resolved.

6. Expressing emotions

People who adopt this mechanism become frustrated, tense and angry as a result of the problem. They take these emotions out on those in their immediate surroundings. Aggression and anti-social behaviour may occur. This coping style is not effective; the problem is not resolved.

7. Wishful thinking and comforting cognitions

People who adopt this mechanism convince themselves that every cloud has a silver lining or that the problem is not as bad as it seems; after all, others are facing even worse problems. No matter how much courage they give themselves, the problem is not solved. This coping style is thus not effective.

Combination of mechanisms

People are usually don't have only one clear coping style, but several. The ways in which people react to problems obviously depends largely on the specific problems that they are facing. In most cases, however, there is a common thread in the approach, consisting of one or more preferred coping styles.

3. Quality of life

Although the concepts of personal well-being and quality of life are closely related, they are not identical. In reality, they are extensions of each other. If a patient 'is not feeling well' and has a wide range of complaints and concerns (mental, physical and social), we can say that the patient is not experiencing well-being at that time. There is discomfort, and no one enjoys that. As healthcare professionals, we notice this and try to obtain insight into what the exact complaints and feelings are, so that we can address them appropriately. We offer practical help (e.g. in the form of medication) and counsel the patient in coping with all the unpleasantness that can go with the disease and its treatment.

Quality of life concerns how people experience their physical, psychological and social functioning. It may also include such aspects as the limitations experienced as a result of illness. 'Satisfaction' is used as an indicator of quality of life. It consists of three elements:

- Satisfaction with life;
- Satisfaction with physical health;
- Satisfaction with psychological health.

Other commonly used indicators of quality of life include:

- Perception of own health;
- Perception of disabilities (problems in functioning);
- Having control over one's own life.

Even if a patient has demonstrable physical disabilities or is barely able to function (if at all), this does not always mean that the person's quality of life is also very poor. The experience of quality of life is

Even if a patient has demonstrable physical disabilities or is barely able to function (if at all), this does not always mean that the person's quality of life is also very poor. The experience of quality of life is strongly influenced by individual expectations about health, ambitions that can no longer be fulfilled (or that can still be fulfilled), mental capacity to cope with limitations, tolerance for discomfort and the ability to cope with chronic illness. For example, two different people with similar health conditions and limitations in functioning may experience their lives completely differently. Despite their equal health status, therefore, their quality of life need not be the same at all.

Consequences for the quality of life

Quality of life is always subjective, and is strongly influenced by an individual's personality, emotional stability, ability to express oneself, social support (or lack thereof) and the number of stressful events.

Physical consequences

Physical consequences in quality of life include the patient's discomfort with physical complaints and the extent to which the patient is limited in the ability to cope with everyday tasks.

Mental consequences

Mental consequences in quality of life include psychological complaints (e.g. anger, fear and depression), which also have a negative impact on personal well-being. They also include complaints that the patient experiences in connection with cognitive dysfunctions (e.g. concentration and memory problems). Loss of autonomy is regarded as a very important factor in decreased quality of life.

Social consequences
Social consequences in quality of life may include possible changes or limitations in personal relationships, social activities and participation in society.

Quality and quantity of life

In addition to the pursuit of long life, the quality of life is becoming an increasingly important consideration. This is particularly true for chronically ill people, as well as for the frail elderly and people in hopeless situations, which are often accompanied by highly disagreeable physical discomforts (e.g. pain, nausea, shortness of breath, itching). Personality factors (especially anxiety) also appear to play an important role in quality of life. Quality of life nevertheless involves more than that. It encompasses the extent to which people are satisfied with a wide array of aspects of life.

For patients who are experiencing problems that are more frequent, more prolonged and, perhaps, more hopeless (i.e. there is no hope that the situation will improve), it will eventually be necessary to address the issue of quality of life (both in the present, as well as what can be expected in the future). It is likely that patients or their relatives will start asking questions about expectations regarding quality of life. Healthcare professionals (physicians or nurses) might, however, still draw the line on certain treatments which could improve quality of life that in the long term may be futile. In contrast, there are also situations in which physicians opt to continue treatment, even against their better judgement, thereby losing sight of issues relating to quality of life. In such cases, it is often nurses who start to question whether the patient is still experiencing quality of life. This is almost always a fraught subject, which should be approached with the utmost care.

In order to improve care, it is important for healthcare professionals and patients to have a timely dialogue about what is important to the patient. This should be done even when curative treatment is still being applied. What are the patient's wishes if this treatment does not work? Discussing what quality of life means to the patient can make it possible to provide more suitable care. The patient must be well informed about the circumstances, prognosis, treatment options and their consequences for their personal well-being and quality of life, both now and in the future.

Treatment limitations

Based on this information, the patient may choose to refrain from further treatment and/or opt to limit treatment. The reasons for deciding on such treatment limitations are highly personal and related to specific circumstances. Ideology or religion can play a role in this as well.

Several examples:
- Seriously ill patients who are at an advanced age and who have very little chance of curation may decide that they no longer wish to be resuscitated.
- For seriously ill patients, the physician may sometimes indicate that mechanical ventilation (or its continuation) is not advisable, as it will not improve the chances of recovery. Starting or continuing ventilation would only exacerbate the patient's suffering without increasing the likelihood of survival. In this case, the treatment limitation 'no mechanical ventilation' may be agreed upon.
- For patients with extensively metastasised malignant disease who are no longer responding to treatment, it may no longer make sense to treat new problems (e.g. infections).
- For very elderly, physically fragile patients, new burdensome treatments (e.g. admission to an ICU or dialysis) may be excessively aggressive and not very useful.

Having a disease and undergoing treatment can often have a major impact on the daily life of a patient. Following the WHO definition of health, the term 'quality of life' refers to the entirety of physical, psychological and social consequences of an illness and/or treatment, as experienced by the patient.

Nurses are closely involved in their patient's current state of health and are often the first to witness (sometimes acute) changes in it. Good clinical judgement is therefore an essential professional skill. Three competences play a key role in clinical judgement: observing, analysing and communication.

ProActive Nursing: Clinical Judgement helps nurses to make a professional assessment of 'how the patient is doing' and to clarify their patient's clinical condition. The book combines the eighteen health care topics of the World Health Organization's International Classification of Functions (ICF) with the three focal points of patient-centred care: wellbeing, bodily functions, and patient functioning. It clarifies what is going well and what is not, what the clinical problems, disorders and limitations of the patient are and what interaction there is between the different problems. All of the eighteen healthcare topics covered in this book are summarized in a practical mind map showing the clinical focus points. There is also a section on the 'Time-out practice model' which helps nurses in a structured way how to apply their clinical judgement skills into practice.

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