
A Land Safety Code for uncertainty in clinical practice

PERSPECTIVES

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There is a cure that protects patients from overdiagnosis and overtreatment, and doctors from insecurity and burnout.



Illustration: Journal of the Norwegian Medical Association

There is a growing awareness of the disconnect between the certain, correct-answer-seeking natural science that medicine is built upon, and real-life clinical practice, where we meet patients in a world shaped by uncertain information, potentially fatal consequences, conflicting values and time constraints (1).

With uncertainty often comes the fear of making the wrong choice. The decisions we make as doctors, either with or on behalf of our patients, can have serious consequences. When something goes wrong, people often assume it is the result of their own actions. This can lead to harsh self-judgement and judgement of others, especially when it feels like the patient's suffering might have been avoided with a different decision. Against this backdrop, defensive medicine – driven by a fear of consequences and the desire to eliminate uncertainty – helps fuel overdiagnosis and overtreatment.

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Through medical school and early work experience, doctors are socialised into often unspoken professional values such as altruism, perfectionism and conscientiousness (2). In stressful work situations, these values are challenged and can lead to uncertainty about one's ability to live up to personal and external expectations, which in turn further increases the risk of more stress. This can create a negative spiral, where growing uncertainty affects self-efficacy and the ability to assess and manage the inherent uncertainty of medical practice.

Since uncertainty cannot be eliminated, we propose a three-part approach to help us navigate it more effectively. We need to speak openly about the complexity of everyday medical practice, develop ways to structure and make sense of uncertainty, and ensure that doctors are equipped with strategies to manage the various types of uncertainty they encounter in their daily work.

Nine uncertainty rules

Consisting of nine rules, Norway's land safety code (known as the Norwegian Mountain Code), which was devised by the Norwegian Trekking Association and the Norwegian Red Cross in 1952, has become a household name in Norway. They highlight mountain safety through specific, practical advice for navigating a complex, uncertain and potentially deadly environment (3). Drawing on research and our own experience, we present a proposed Land Safety Code for uncertainty in a format that can be applied to clinical practice (Box 1).

Box 1 Land Safety Code for uncertainty in clinical practice

1. Accept and embrace uncertainty.
 2. Break down the sources of uncertainty.
 3. Find a balance between a curative and a palliative approach to uncertainty.
 4. Always include the patient, and their family, when appropriate.
 5. Seek a balance between evidence-based medicine and tailored decisions.
 6. Be aware of the difference between intuitive and analytical decisions and which tools different situations require.
 7. Make safe choices. Consult with colleagues. Find the balance between humility and courage.
 8. Know when to back track – there is no shame in reassessing. Be open and flexible to changing course.
 9. Stay calm and seek support when needed. Offer and request supervision and feedback from your colleagues.
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Rule 1: Accept and embrace uncertainty. Clinical uncertainty often feels unnatural, especially in the early stages of our careers, when it can be perceived as a sign of our own inadequacy. This can result in insecurity and a fear of making mistakes (4), which can ultimately lead to burnout. Learning to accept, embrace and befriend uncertainty is essential for surviving and thriving in the medical profession.

«Learning to accept, embrace and befriend uncertainty is essential for surviving and thriving in the medical profession»

Rule 2: Break down the sources of uncertainty. In practice, the uncertainty you are experiencing needs to be analysed. A good starting point for reducing uncertainty is to try to identify its underlying cause. This can be placed in four categories: uncertainty about the evidence base (diagnosis, causal relationships, treatment and prognosis); uncertainty about the organisation of care (who, what, and where treatment should occur – how, and at what risk/benefit); the patient's and/or families' personal uncertainty or sense of insecurity, and the clinician's personal uncertainty (have I thought of everything?) and/or insecurity (am I capable of dealing with this?)

Rule 3: Find a balance between a curative and a palliative approach to uncertainty. Once we have identified the source of our uncertainty, a helpful next step is to consider the spectrum between a curative and a palliative approach to uncertainty – in other words, the balance between working to reduce uncertainty and learning to live with it (5).

In diagnostic work, the tension between curing and easing uncertainty can be substantial. We need to be able to have two trains of thought at the same time. When we are uncertain of the cause of a patient's symptoms, our goal is to reduce uncertainty until we can rule out dangerous or potentially life-threatening conditions. However, we also need to determine what level of uncertainty is acceptable – not only for us as doctors, but also for the patients and their families. If our sole focus is on reducing uncertainty, overdiagnosis can easily occur. We therefore need to choose wisely (6). Always consider both the likelihood and the severity of potential conditions – become proficient in recognising common and dangerous conditions.

Rule 4: Always include the patient, and their family when appropriate. The best answers to uncertainty often emerge through dialogue with the patient. Before performing a diagnostic test, we must ask ourselves: What is the likelihood of finding 'something'? Is the test necessary? Will it affect the treatment? Are we performing the test to make ourselves as doctors feel less uncertain, or to reassure a worried patient? Is the uncertainty tolerable for both parties? Are we confident enough to wait and see? The patient's perspective should be central. What does the patient think might be causing the symptoms? What is the patient afraid it could be, and how serious and justified is their concern? The more uncertain we as doctors are about the diagnosis, treatment or further management of a clinical issue, the more important it is to understand the patient's perspective.

«The best answers to uncertainty often emerge through dialogue with the patient»

Rule 5: Seek a balance between evidence-based medicine and tailored decisions. While evidence-based medicine has driven major advances in treatment and improved patient outcomes, it has also given rise to algorithms and guidelines for diagnosis and treatment that can obscure the complexity of applying group-based evidence to individual patients. In a clinical world full of grey areas, a variety of solutions may be valid, and the best decisions are often made together with the patient. This requires confidence that approaches outside standard guidelines and evidence can also be wise, justified and effective.

Rule 6: Be aware of the difference between intuitive and analytical decisions and which tools different situations require. A doctor's work entails making clinical decisions, continuously and constantly. A Norwegian study has shown that an average of 13 major and minor clinically relevant decisions were communicated per consultation in the specialist health service (7). Awareness that decisions are often interconnected, sequential, and involve varying degrees of uncertainty is a good start. Once a diagnosis is determined, subsequent decisions about treatment and management can be made with less uncertainty.

Above, we discussed decision-making processes that involve an analytical approach and allow time for well-considered choices – referred to as System 2 processes in the literature (8). In acute, time-pressured situations, however, uncertainty must be managed through faster, more intuitive decision-making (System 1 processes), for example, when an unconscious, unstable patient arrives at the emergency department with minimal medical history. For a doctor with limited experience, a situation like this can be one of the most uncertain and frightening scenarios they will encounter. Swift action is required. A structured and prioritised approach to the patient (using the ABCDE method) buys time to think analytically while simultaneously initiating interventions to stabilise the patient.

Even less acute situations can involve considerable uncertainty, such as breaking bad news or discussing prognosis. Simple, structured tools can help us navigate these situations and reduce the clinician's insecurity, thereby fostering a feeling of safety and trust in the dialogue with our patients.

Rule 7: Make safe choices. Consult with colleagues. Find the balance between humility and courage. No matter how experienced we are as doctors, we encounter situations every day that make us feel uncertain. Medicine is a team effort, and we must work together to create a working environment where we can ask each other for help and discuss uncertainties. Humility in the face of uncertainty is a safe starting point, but there will be times when courage in the face of uncertainty will be just as important.

Rule 8: Know when to back track – there is no shame in reassessing. Be open and flexible to changing course. A range of cognitive biases and heuristics can influence us in clinical practice, sometimes making us overly confident in a diagnosis or course of action in a given situation (8). A professional must always remain mindful of the risk of becoming trapped by assumptions. Overconfidence should prompt us to ask more questions. Always consider probabilities and alternative diagnoses and solutions. Adjust your course when new information calls for it. All doctors make mistakes: acknowledge them and turn them into valuable learning experiences.

«Always consider probabilities and alternative diagnoses and solutions. Adjust your course when new information calls for it. All doctors make mistakes»

Rule 9: Stay calm and seek support when needed. Offer and request supervision and feedback from your colleagues. How much focus do we place on how we talk about uncertainty with patients or colleagues? We believe there is significant room for improvement. How accurate are our observations and how constructive is our feedback in clinical practice? There is considerable room for growth here. This could be partly because many feel uncertain about how to do this in a way that facilitates learning within a safe framework. Simple and effective methods exist for this (9). A useful rule of thumb when giving feedback to a colleague is 'specific praise, questioning critique' (Pål Gulbrandsen, personal communication). When giving someone praise, be specific about what they did well. If you notice something that could be improved, be curious and reflective rather than direct and confrontational.

Together, we need to create a culture where supervision and feedback are central to bringing out the best in us and developing our professional community. Providing good supervision and feedback is also enriching for the experienced doctor. The experienced

clinician must lead by example, openly discussing, demonstrating and normalising uncertainty – both personal and medical – and help foster an environment where it is safe to expose our own uncertainty (10).

What can health authorities, organisations and management do?

New learning objectives for specialty registrars in Norway include being able to 'communicate their own and the patient's uncertainty in a way that fosters reassurance and understanding' (general competence objective no. 21). They further state that 'in clinical practice, doctors must not only navigate their own uncertainty, but also the inherent uncertainty of medicine' (11).

How effectively are we supporting students in meeting this objective? In Norway, specialist training is loosely structured, with each hospital defining its own learning activities based on national learning objectives. Many hospitals have introduced supervision courses, communication training and mentoring groups, and some have departments with a strong tradition of individual mentoring. Others, however, have little or no structure in place, and there is considerable variation across the country. We need specialist training in Norway to be much more structured, and a national coordinating centre should be established to systematically promote supervision and mentoring throughout the country. Even fully qualified doctors need structured settings and appropriate support in navigating professional uncertainty. When interdisciplinary teams have a high level of psychological safety, it promotes the sharing of experiences of uncertainty and professional doubt.

Together, we must build a culture where embracing uncertainty – both medical and personal – becomes part of our professional DNA and a joint effort to develop and improve our performance collectively. This will not only benefit our patients and the welfare system but also help prevent insecurity and burnout in doctors.

A special thanks to Paul K. J. Han for his initiative and kind, expert support in the work on this article.

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Publisert: 1 October 2025. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.25.0274
Received 14.4.2025, first revision submitted 16.6.2025, accepted 19.6.2025.
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