Nursing knowledge: the role of Plato in wound care

Using wound care as an example, the author reflects on the knowledge and skills practised by nurses in nursing and research. He emphasises reflecting on practice, and introduces the importance of non-existent states of affairs, the grasp of which is essential in analysing what it is to act in patients’ best interests.

According to Watson (1997), the aim of reflective practice is to inform and transform nursing practice. Good nursing practice requires knowledge, both in terms of knowing that, for example, venous leg ulcers may need compression bandaging, as well as knowing how, for example, to apply such bandaging. However, careful reflection on such knowledge and quite why it is so important in nursing practice, is minimal and sometimes wrong.

To grasp fully the concept of knowledge, it is necessary to understand the perhaps baffling issue of ‘non-existent states of affairs’. To understand how this relates to nursing professionalism and acting in patients’ best interests, the concept is considered here in relation to wound care and how the non-existent affects what underlies good practice in this field.

THE NON-EXISTENT IN WOUND CARE

In the treatment of wounds there is a simple way in which identifying what does not exist is highly significant in promoting healing, not least because of the importance of being aware when healing is lacking. Noting the absence of new epithelial cells across a wound surface can be as significant as noting the presence of infection, and the absence of epithelial cells is simply the presence of no epithelial cells. Practitioners who note the absence of important cell formations are doing as they should, and omitting to notice may be detrimental to the patient’s best interests and constitute a violation of the Code of Professional Conduct (UKCC 1992).

This is a relatively simple example of the concept. It is important to consider more complex ways in which what fails to exist is important in nursing care and treatment.

KNOWLEDGE

Possessing propositional knowledge, for example knowing that a wound displays clinical signs of infection, or that a patient shows signs of malnutrition, is an obvious and important element of wound care, although not the only element. However, if nurses lack knowledge that the wound they are examining has certain features or requires certain treatment in order to eradicate infection, they are unlikely to succeed in their aim to heal. They may succeed by accident, but patients are entitled to be nursed by knowledgeable practitioners, and nurses need to know that they are encountering one type of ulcer rather than another. For example, an arterial ulcer may be diagnosed mistakenly as venous, with harmful effects for the patient (Vowden 1997).

For these reasons, practitioners’ knowledge is prized by practitioners and patients alike, and ‘knowledge-based’ treatment is a recognised requirement for safe outcomes for patients. Examining the conditions traditionally thought necessary for the possession of this knowledge, and seeing how they contribute towards patient care, will help to show how the non-existent can be an essential element of good nursing practice.

Nurses typically need to possess some degree of conviction or belief to be said to possess the knowledge that, for example, certain wounds are indeed arterial in origin. This is the belief condition on knowledge, often cited as being necessary for anyone to know anything (Plato c400bc, in Guthrie 1956). If such belief is lacking, nurses may be acting irresponsibly, although it is possible that they are simply obeying a superior’s instructions. If acting from their own knowledge, to act with due care they need at least to believe what it is that they know, and even believe that they know it. If they lack belief that the wound being examined is, say, venous, perhaps having lost confidence in recalling some aspect of training, and even if they act correctly in treating the wound, demonstrating to others that they possess relevant knowledge, they may yet be acting irresponsibly. Arguably, this infringes Code of Professional Conduct requirements – to acknowledge limitations and decline duties accordingly (UKCC 1992). Patients who are aware of this might reasonably be concerned.
Belief on its own, which also includes varying degrees of certainty, is insufficient for knowledge because, although it is truth-centred, the belief may prove to be false. Acting on an erroneous belief may have undesirable consequences for the patient. Propositional knowledge requires, therefore, not merely belief but also the truth of that which is believed.

LUCKY GUESSES
If a nurse, then, has a true belief that what is being observed is a venous ulcer, is that sufficient for knowledge? The answer is ‘no’, because he or she may have hit upon the answer by a lucky guess. He or she might guess differently the next moment, or be swayed by some irrelevant feature or misheard remark from colleagues. Informed patients would be unhappy to have their wound treated in this manner because luck does run out. Justification for the nurse’s belief, involving reference, in this example, to previous medical history, a range of observations to assess blood flow and the nurse’s experience, is needed for knowledge (Vowden 1997). The requirement for justification can be seen as the basis for evidence-based nursing and, for example, for research into wound care.

Also in this example, a causal link may be used to explain the way the belief is justified as true. Having reviewed the available information on the patient’s medical history, the nurse’s observations of Doppler readings within the acceptable range, haemosiderin pigmentation, varicose eczema and induration, cause the belief. The causal explanation of these observations involves reference to venous insufficiency which itself causes the ulceration and accounts for its identification as venous.

However, some authors (Gettier 1960, Goldstein 1990, Pappas and Swain 1978) have suggested that truth, belief and justification, conjointly, are still insufficient for knowledge. The insufficiency, it is here suggested, rests with features of the non-existent. In our example, venous ulceration cannot always easily be distinguished from arterial or mixed aetiology ulcers (Gilliland and Wolfe 1991); all may present in the same anatomical region with similar wound bed features. Nurses may be ignorant of this source of confusion. Perhaps they have little experience of caring for people with arterial disease, but are well acquainted with venous conditions. So, even though their true belief that venous ulceration is present can be justified — and even if that justification can be articulated and is appropriately caused — it is questionable whether they know what it is that they believe. They are unaware of features of arterial ulceration and so a question mark hangs over their knowledge because of evidence they do not possess (Harman 1973). Had they been aware that arterial ulcers may look the same as venous ulcers, it is possible they would have lost their conviction that venous ulceration was present, probably agreeing that they did not know what they were observing. Patients with either condition who were aware of the nurses’ aptness to give up belief (Sorell 1981) would have had good reason to lose confidence in treatment in this area. So, unwittingly perhaps, some nurses may be unable to discriminate between the two types of ulcer mentioned. Patients aware of this ‘discriminating inability’ would rightly have doubts about the appropriateness of the treatment being delivered to them.

Knowledge, because it involves justification, needs to be sensitive to evidence and so requires changes of mind when relevant evidence changes, yet, equally, stability when irrelevancies occur. It is possible that sometimes nurses may know and yet not realise that they know and hence not believe what it is that they know. For example, a newly qualified nurse, because of having completed training recently, might well know that the leg ulcer being examined is arterial, but because of the authority of a junior house doctor who insists it is venous, he or she may lose confidence and accept the doctor’s diagnosis, applying compression bandaging with unfortunate results (Moffat and Ottaire 1995). Did the nurse lack knowledge because of the instability of the belief? Or is it an unreasonably stringent demand that a ‘knower’ should retain belief in the face of any amount of evidence, however misleading? The answer to the latter question must be ‘yes’, otherwise knowledge itself would be non-existent.

RELIABILITY
Whatever the criteria for the stability in belief in knowledge, a key concern is that practitioners’ beliefs, and therefore their actions, are sensitive to relevant differences which they observe and, importantly, might observe. What knowledge requires — and this coincides with what reflective patients should expect and what nurses should seek to offer — is reliability in getting things right. A hint of this feature of knowledge is also to be found in Plato (in Guthrie 1956); this has developed into a ‘reliability analysis’ of knowledge (Watling 1954).

Reliability in getting things right is a skill, and skills are a matter of knowing how to do things in a variety of circumstances. A mistake is to ignore the fact that the variety of circumstances must embrace those circumstances which may never be encountered, for example, arterial ulcer cases. A nurse’s knowledge that, to take another example, a wound is pyoderma gangrenosum is, in part, a matter of knowing how to discriminate pyoderma gangrenosum from other ulcers, and knowing how to do so reliably. Reliability must extend to circumstances which nurses may, as a matter of fact, never encounter.

If a patient is being treated correctly through luck, why is it necessary to seek further reliability? From
the nurse’s viewpoint, of course, he or she is unlikely to nurse one patient exclusively and so, in other circumstances, bad luck may be encountered, exposing unreliability. Even if the nurse happens to hit lucky throughout, he or she has failed to meet professional requirements. What constitutes professional behaviour is not merely an array of right actions, but also a set of abilities, dispositions and know-how, which extend beyond actual circumstances to the possible but non-existent. For nurses to be reliable in the treatment of ulcers, not only must they give the correct treatment if encountering an arterial ulcer, but even if they never see one, it must still be true that they would have delivered correct treatment.

Why should patients, through luck being treated correctly, deserve such reliability? Altruistically, the concern that others, in different circumstances, might be treated wrongly is an important factor. Also, things might yet go badly for the patients being treated or they might be treated inappropriately on future occasions when presenting with the other conditions which the nurse cannot distinguish from the correct condition.

CAUSAL OR CASUAL?

The distinction between the causal and the casual is of considerable significance when assessing wound treatments; the distinction itself demands essential reference to features of what are not. For example, the efficacy of expensive wound treatments, such as hydrogels and hydrocolloids, in comparison with simple low adherent dressings, has been widely debated (Fisken and Digby 1996). The difficulty in establishing the superiority of one over the other exists because, once the expensive treatments have been applied to a particular wound, it is logically impossible that that wound itself be treated solely with the simple low adherent dressings.

To establish the causal connection that, for example, the hydrogel treatment promoted a clean wound bed within three days rather than five days, not only must the hydrogel treatment be followed by a clean wound within the three days, but non-hydrogel treatment, in this particular case, should have been followed by no such cleaning until after the three days. If, however, we observe the first case, of hydrogel treatment being followed by recovery after three days, of logical necessity we cannot observe the second case, of non-hydrogel treatment being followed by a slower recovery; this is because that state of affairs, with regard to this particular case, simply does not and cannot now exist. This non-existent state of affairs, however, is essential for the causal connection in the existent state of affairs to hold. Only if the features of the non-existent state of affairs are as said, is it plausible to believe that, with regard to the actual treatment, the hydrogel really was the cause of the swifter recovery. If, in the non-existent state of affairs, the lack of hydrogel treatment is not followed by a slower recovery, then with regard to the actual treatment it is difficult to conceive how the hydrogel was responsible for the speedier outcome. The connection between hydrogel application and swifter outcome would be a casual connection rather than a causal connection.

Causality is thus seen to involve reference to what would have been, a reference derived from the eighteenth century philosopher David Hume, who mistakenly believed one of his definitions of cause could be put in other words, where the other words were ‘If the first object had not been, the second never had existed’ (Hume 1975). Similar words have generated ‘counterfactual analyses of causation’, such as that offered by Lyon (1967).

In general, in situation X, what makes the difference between event Y merely being casually followed by event Z, and event Y causing event Z? As the example illustrates, one essential element involves a non-existent state of affairs, namely the very same situation X but without the occurrence of Y. A necessary condition for Y being the cause of Z, is that in this non-existent state of affairs where Y fails to occur, Z also fails to occur. Were it the case that Z still occurs in such a state of affairs, then Z’s occurrence has nothing to do with Y because, by the hypothesis, Y has not occurred in that non-existent state of affairs. So, in the existent state, although Y does in fact occur, it is casually connected with Z rather than causally so.

When practitioners note conjunctions between wound treatments and outcomes, they need, of course, to know whether they are casual or causal. Establishing the causal connection is extremely difficult, though not impossible. With regard to venous ulceration, for example, an increasing amount of evidence has been built up which indicates that compression bandaging speeds healing (Mayberry et al 1991). This, of course, has not been achieved by one and the same wound at the same time being treated both with and without such bandaging; that is a logical impossibility. It has been achieved through randomised controlled trials (RCTs), by comparing healing rates for similar wounds under similar conditions – save for the difference in treatment, some wounds being with, and some without, compression bandaging.

The problem in all such research is, of course, that of identifying what counts as similar conditions. Such identification carries assumptions concerning which elements are causally relevant and which are but casual, and hence causally irrelevant. For example, Lewis (1996) reviewed nutritional factors in the aetiology of pressure sores and demonstrated how, from a small number of patients, a link was suggested in the 1940s between pressure sores and low protein status as measured by plasma proteins, negative nitrogen balance and low nitrogen intake. However, in 1961, as a result of animal studies, it was
suggested that there was no such relationship. Should one count other animals as satisfying the similarity requirement? Many would answer ‘no’. Should one count humans living 50 years earlier? Many would answer, possibly unthinkingly, ‘yes’. However, of course, their conditions may be radically different from today’s. Whatever the correct answer, researchers are already operating, albeit unwittingly, with features of the non-existent, with what is conceived as causally relevant and what is conceived as nothing but a casual relationship.

CONCLUSION

Features of the non-existent are essential elements of knowledge and causality. They are essential to what constitutes good practice in wound management, both in actual treatment and in research into wound healing. They are, indeed, essential throughout nursing practice. As a result, the non-existent is also important to certain ethical concerns, because of its relevance to grasping what is involved in nurses acting in patients’ interests. Reflective practice is itself usually an element of good practice and research; and so, such reflection by practitioners should involve awareness of the importance of the non-existent. The ethics of wound management practice, manifested in the Code of Professional Conduct (UKCC 1992) as concern for good practice and for patients’ interests, necessarily involves therefore, at least indirectly, the non-existent.

ACKNOWLEDGEMENT

The author wishes to thank Leonora Descombes, Tissue Viability Specialist, for her encouragement and wound care information.

REFERENCES

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