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LEARNING/TEACHING

# How to Teach Holistic Care – Meeting the Challenge of Complexity in Clinical Practice

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ABSTRACT **Context:** *Removal of underlying pathologies through the application of science and technology alone will not restore a patient's health; that will require connecting with the person behind the disease. Being ill changes physical and social functioning, emotional well-being, and last but not least, it affects one's self-concept. It invariably leads to questions of the meaning and understanding of being ill, hence Pauli* et al. *(2000) termed the notion of a somato-psycho-socio-semiotic paradigm of health.*
**Objective:** *Understanding health in this context allows the conceptualization of health as a balance between these four domains.*
**Methods and Conclusions:** *This paper describes, through a systems-based methodology, the translation of the somato-psycho-socio-semiotic understanding of health into a flexible teaching approach for students and in a postgraduate setting for registrars. This teaching mode, by making the different dimensions that affect a person's health transparent, has helped learners to rapidly progress towards our goal of becoming holistically practicing clinicians.*

KEYWORDS *Medical education, holistic care, clinical decision-making, complexity, systems thinking.*

## Introduction

"I can't hear you while I'm listening'' (Baron, 1985)—this is not an atypical way to interrupt a patient. It is not surprising that these type of experiences lead to a decrease in patients' trust and respect for medicine. It also reflects, more generally, medicine's preoccupation with disease, technology and business models and conveys a clear message of disinterest in a patient's concerns and experiences. (Baron, 1985; Sturmberg, 2002)

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Hence it is not surprising that patients call for a more holistic approach to their care, or simply leave doctors for alternative practitioners. Much of this has to do with the way we teach medicine. Changing our approach to teaching could greatly help to change the slow demise of medicine as we know it today.

This paper discusses an educational approach that helps students to become holistic and patient-centred, valuing and practicing both the art and the science of medicine (McWhinney, 1989). The model presented here was developed and evaluated in the context of learning at the School of Rural Health, University of NSW, Australia (Sturmberg *et al*., 2003).

## Reflections

Health care delivery is changing dramatically, with more and more care being provided with the help of sophisticated community health care teams. This organizational change very much reflects the burden of disease in the community and the distribution of all types of health care providers within the community (Figure 1).

### *Health and Disease*

As Osler said, ''It is more important to know what sort of a patient has a disease, than what sort of a disease a patient has'' (Bean, 1961). Removal of underlying pathologies through the application of science and technology alone

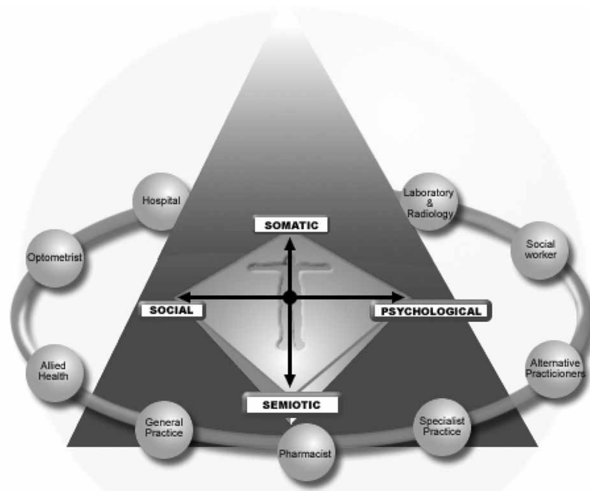


**Figure 1.** An integrated, systems-based model of medical care. The patient with his illness experience (quadrant) is in the centre of the morbidity pyramid, surrounded by the resources of the health care system (circle). The pyramid reflects the morbidity within a community—the bottom represents self and primary care and the tip symbolizes the exceptional event when specialized care is needed.

will not restore a patient's health; that will require connecting with the person behind the disease.

Being ill changes physical and social functioning, emotional well-being, and last but not least, it affects one's self-concept. It invariably leads to questions of the meaning and understanding of being ill (Feinstein, 1967; Baron, 1985; Tresolini, 1994). Recently Pauli, White & McWhinney (2000) coined the term ''somato-psycho-socio-semiotic paradigm'' of health, expanding the bio-psycho-social model to include the informational or semiotic modality, i.e. the dimension of making sense out of the illness experience.

Using a framework suggested by Pauli *et al.* (2000), a healthy person can be described as one whose somatic, psychological, social and semiotic requirements are balanced (Figure 2a).

A divergence from this balance can then be described in terms of illness (Figure 2b), which can occur in any direction. Depending on the direction of the deviation, we label the result a physical, mental, social health problem or a problem of not understanding one's situation. Not uncommonly, especially when one component appears overwhelming, doctors—and at times patients, too—fail to acknowledge the impact of the disease label on the whole person.

Healing requires the restoration of the balance between all four components of health and does not require a cure of the problem in the traditional sense (Baron, 1985). As is well known, many patients with chronic conditions, somatic or otherwise still regard themselves to be in ''good health''.

### *Teaching*

The way we—as teachers—view health and disease does determine our approach to teaching. Predominantly focusing on pathologies conveys a strong disease-focus, whereas always also contemplating the impact of the pathology

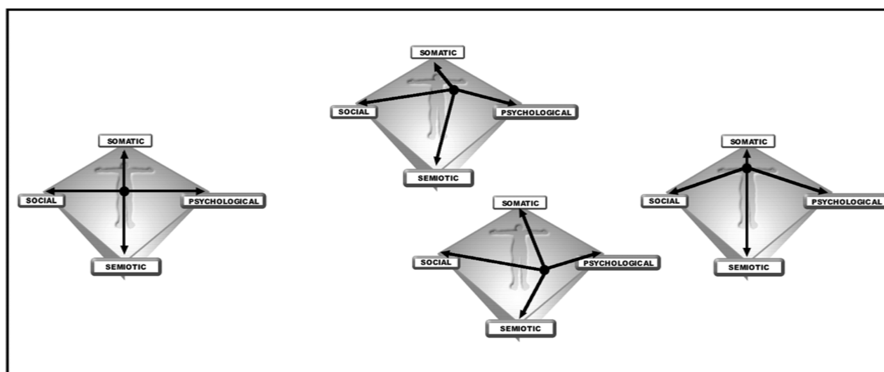


**Figure 2.** (a: left) A healthy person's somato-psycho-socio-semiotic components are in balance; (b: middle) minor shifts of the balance occur with common community-based complaints; and (c: right) a major shift towards one component occurs with life-threatening complaints.

on the patient conveys an illness-focus, i.e. expressing an interest in the whole person. Without an illness focus, management of disease can become rather difficult (Baron, 1985; Tresolini, 1994).

Teaching medicine from a holistic, patient-centred perspective does not imply a diminution of the importance of the medical sciences. Rather, it reinforces the role of the clinician, i.e. the doctor who practices the art and the science of medicine concurrently (Baron, 1985; McWhinney, 1989).

## Teaching Complexity in Medicine

We talk about the healthcare system without acknowledging the underlying complex inferences. It should be obvious at this stage that embracing patient-centred care can only occur if one accepts the many factors and their often contradictory influences on a patient's illness. In systems theory, the whole is more than the sum of its parts and understanding the complex interrelationships between system components is more important than understanding the components themselves (Capra, 1996; McDaniel, 1997).

Teaching holistic, patient-centred care involves a four-staged approach:

- The first stage involves acquiring basic knowledge, i.e. an understanding of the components that underpin each of the four dimensions of health and disease (Table 1).
- The second stage is critical. Here teaching focuses on understanding the relationships between the components, i.e. appreciating the interconnectedness of the somatic, psychological, social and semiotic dimensions of health and disease.

**Table 1.** Topics covered by each the four dimensions of health

| *Somatic* | *Social* |
|---|---|
| • Anatomy | • Family |
| • Physiology | • Housing |
| • Pathology | • Local community |
| • Genetics | • Lifestyle habits—smoking, drinking, physical activity, diet |
| • Investigations | |
| • Therapeutics | |
| *Psychological* | *Semiotic* |
| • Stress | • Meaning of illness |
| • Anxiety | • Understanding of illness |
| • Depression | • Understanding the world in which we live |
| • Grieving | • Self-image |

- Having mastered the first two stages, the next one deals with the transfer of this knowledge and understanding into the capability to heal patients, i.e. helping patients to restore their balance of health.
- The final stage of teaching is based on the insights and appreciations gained from a systems view of health and disease and aims to transfer the holistic, patient-centred approach to patient care across the health care system, i.e. to fully integrate the different health care providers into the healing process.

## Holistic Teaching—The Patient with Chest Pain

The philosophy of holistic teaching was the foundation underpinning the longitudinal, patient-centred, integrated curriculum of the Rural Clinical School and has been previously described in this journal (Sturmberg *et al.*, 2002).

Holistic patient-centred teaching is less dependent on finding patients with a particular disease, since any disease may be found behind a patient's presenting symptom (Table 2). Thus students will cover the whole range of learning objectives in relation to the somato-psycho-socio-semiotic dimensions of health and disease with each patient presentation (Table 1). It simply becomes a matter of exploring all the issues—and their interrelationships—in the context of a particular patient.

**Table 2.** Patient presentations of chest pain in each of the four dimensions of health

| | |
|---|---|
| *Somatic*<br>• Mr AK presents with crushing chest pain, looking pale and sweaty, and feeling nauseated.<br>• Mr FG complains about pain across his chest after playing soccer over the weekend.<br>• Mrs MR can't fall asleep due to central chest pain after going to bed.<br>• Mr HM has increasing chest pain and shortness of breath over the past 48 hours. | *Social*<br>• Mr PC feels off for the past 6 weeks. He complains about intermittent chest pain, particularly when lying in bed unable to sleep. On close questioning he reveals that he had difficulties at work. His boss took him aside to have a talk with him. He said he had taken it to heart. |
| *Psychological*<br>• Mrs JF complains about pain over her heart. She feels tired and lethargic, and sleeps for 15 hours a day. Your records show that her husband died of a heart attack three months ago. | *Semiotic*<br>• Mrs YD, a science teacher, had exhaustive investigations for intermittent chest pain without any abnormalities been found. She finally decided to quit her job, and "a stone fell off her heart". |

Developing multiple cause diagrams about a teaching topic like "the patient presenting with chest pain" helps to maintain a holistic, patient-centred teaching/learning focus. Not only does it facilitate the understanding of the network of relationships between the patient's somato-psycho-socio-semiotic dimensions, it also helps to listen and make sense out of his story. At the same time, it helps the development of diagnostic skills enabling students to fully appreciate the nuances of the spectrum of diseases associated with a presenting symptom. In a natural way this approach expands into interdisciplinary learning/care.

*Illustrating the Teaching Approach*

A typical student experience is 56-year-old Mr AK, who presents to the emergency department with severe chest pain. Intuitively one thinks about a life-threatening emergency, most likely a myocardial infarct, in which case he will require the specialized skills of the medical and allied health care providers. Students will readily learn from these "nuts and bolts" of Mr AK's emergency treatment.

In overall terms, Mr AK presenting to the emergency department is the trigger for further teaching and learning during tutorial sessions. However, it should be pointed out here that the overall approach to teaching holistic medicine is iterative.

*Stage 1—Gaining Basic Knowledge.* In the initial stage, students identify the key knowledge elements of Mr AK's problem under the heading of each of the four dimensions of health and disease, and they acquire their core knowledge by self-study and guided review.

*Stage 2—Understanding the Interconnectedness of the Various Illness Aspects.* The second stage of teaching focuses on Mr AK's health and disease in his entire context. Guided by the somato-psycho-socio-semiotic model Mr AK's, serious symptoms would shift his balance of health markedly to the somatic corner. Yet as Figure 2c illustrates, there also is a great need to address the social, psychological and semiotic dimensions of his illness—as is revealed by their increased vector length.

The diagram serves as a metaphor emphasizing the dynamic and complex nature of health as a unique personal experience and Mr AK's arising health care needs. It also is a metaphor to help students to understand that any illness is associated with changes in all health dimensions and that addressing only one aspect of the illness usually will fail to restore a patient's balance of health.

Taking these considerations into account, students develop a multiple cause diagram for Mr AK, who presented with chest pain related to a coronary event (Figure 3). This exercise starts with assembling the components and sub-components of each domain before considering potential cause and effect relationships. This seldom is associated with difficulties in relation to the patho-

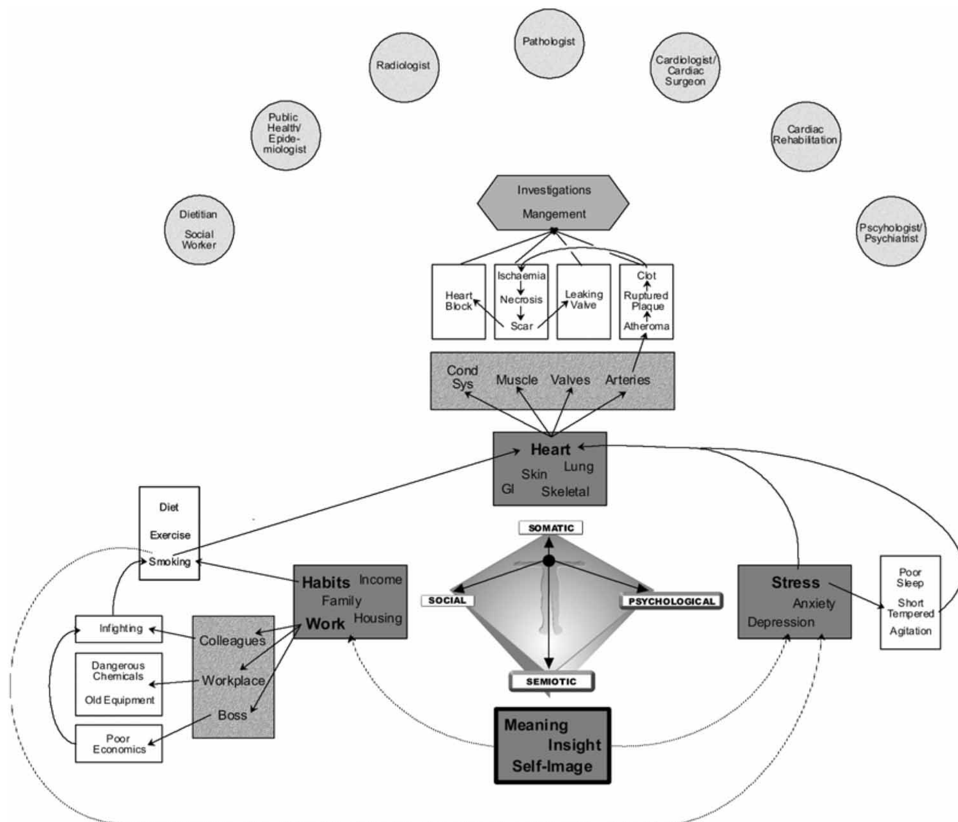


**Figure 3.** Systems-based approach to holistic, patient-centred learning—the patient with chest pain. Inner layer: broad problems to contemplate; middle layer: individual and interrelated learning objectives; outer layer (circles): interprofessional relationships. Solid lines indicate causative loops, dotted lines indicate alleviating loops, for clarity reasons the connections to other health care providers have been omitted.

physiology of a problem; however, students require help with identifying connections between the components of the other domains.

The somatic aspects of a heart attack are easily identified as diseased arteries and the rupture of a plaque, leading to a cascade of changes resulting in muscular necrosis, pump failure and conduction abnormalities. Underlying causes for these changes amongst others include genetic inheritance, defects in the lipid metabolism and poor lifestyle habits.

The multiple cause diagram also facilitates an understanding of the interrelationships of psychological and social life events with somatic complaints. Psycho-neuro-immunology has identified the stress-related consequences of adrenaline and cortisol levels on tissue reactions (Benschop *et al.*, 1995; Kop, 1997) and has proven that the patient's attribution of "that stressful event two days ago", rather than their well-known risk factors, has a plausible relationship to the patient's understanding of his illness.

Equally, social behaviours become understandable, even though they cannot be condoned. For example, smoking is a well-established risk factor and well recognized by most smokers. Nevertheless, many smokers view stress as the real "killer" and smoking helps to relieve their stress (Reid, 1998).

And finally, we may not be able to change Mr AK's circumstances, but understanding him as a person and appreciating his interpretation of his predicament are the pre-requisite for helping him to make sense out of his illness (Tresolini, 1994; Pauli *et al*., 2000) and to engage him in becoming an active partner in the therapeutic relationship.

*Stage 3—The Healing Plan.* Having understood the interconnected nature of Mr AK's illness, students are now encouraged to develop a set of treatment modalities that address all of his interconnected care needs. We often use opposites to reinforce the importance of this point. Mr AK coming to terms with all aspects of his illness episode will help him to recover as a healthy person, who happened to have had a heart attack. Whereas solely focusing on ischaemic heart disease, as the expression of molecular events driven by faults in our genome and staying removed from the broader context of his disease episode, more likely will render him a cardiac cripple.

*Stage 4—Implementing the Healing Plan.* Now that students have developed a care plan for Mr AK, they engage the relevant other health care providers into the care process. The emphasis for this stage is to communicate the patient's disease, his perception of the illness and his treatment expectations and to seek feedback from the other health care providers of their perceptions and experiences in dealing with Mr AK. Wherever possible and appropriate students are expected to organize case-conferences with the patient, his family and all involved health care providers.

This stage would be ideally placed to initiate interdisciplinary teaching/ learning with students from other health disciplines.

## Conclusions

Holistic, patient-centred medicine embraces as much the art as the science of medicine. Healing within the somato-psycho-socio-semiotic framework is about restoring a patient's balance of health. The proposed systems-based approach, operationalized through a systems map, provides a flexible framework to teach students, and registrars in a postgraduate setting, to embrace the complexities of healing and to reconnect to the profession's roots of the "healer" (Baron, 1985; Strasser, 1991).

Very preliminary evaluation of this teaching approach, based on the acknowledgement of the students' impressive clinical capabilities, suggests that teaching holistic care is achievable (Sturmberg *et al*., 2003). Holistic

teaching is a step towards reaffirming our role as healers, and it will help to regain the patients trust (Fugelli, 2001), confidence and respect in their doctors.

## Key Learning Points

- Holistic, patient-centred care requires an understanding of a patient's somatic, psychological, social and semiotic (meaning of his illness) needs.
- Health is a balance between the somatic, psychological, social and semiotic needs, and illness is a deviation from this balance.
- A systems approach provides a framework to understanding, teaching and implementing holistic, patient-centred care.
- A holistic, patient-centred approach will enhance the relevance and effectiveness of medical practitioners as 'healers' without diminishing their expertise as medical scientists.

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