

The rôle of communication skills in clinical diagnosis

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A communication skill may be regarded as: 'Any act or process which when used enables the user to understand the other person, or alternatively allows the other person to understand the user.'

I think it is also true to say that when we use the world skill, we generally use it to imply a high degree of competency, and so I believe there is a general expectation that the use of such communication skills will enhance communication between two individuals.

Whilst one could debate the following idea, I believe it is fair to postulate that in general terms the 'basic unit' which comprises a communication skill consists of two components.

The first of these is knowledge, and has been called by Gagné and Briggs,¹ the 'executive routine'. This knowledge may be viewed as a kind of rule which tells the individual what to do in order to execute or demonstrate a skill.

The act of doing, or initiating behaviour, is the second element of the basic unit, which thus consists of a 'knowing component' and a 'doing component'.

Thus the 'basic unit' of the communication skill of questioning consists of knowledge about the various kinds of questioning, e.g. the relative advantages and disadvantages of closed versus open questions, and the verbal ability to ask such questions.

Whilst the definition of a communication skill focuses on the nature of the interaction between two individuals, there is an important indirect benefit from training in communication skills which contributes greatly to the successful use of any individual skill.

This is the fact that when one engages in communication skills

training, and comes to insights about such things as the identification of anger in another person, one inevitably learns things about oneself.

As a consequence of these kinds of insights, one could be said to become more skilful at communicating with oneself. This improved ability to monitor one's own level of functioning is an important facility, and when mastered can add a great deal to the process of clinical diagnosis, as will be demonstrated later.

As defined above there are two major uses of communication skills in the general practitioner consultation. These are:

- to enhance the diagnostic process — where the use of such communication skills is therapeutic. (When used in this way such skills are given labels such as counselling and psycho-therapy).

Where communication skills are used to enhance the diagnostic pro-

cess, the general practitioner is generally using one or more of a wide range of what I shall call *general skills*.

Where the use of such skills is therapeutic, they are usually used in a combination and generally coordinated within some given style of school of counselling or psycho-therapy. That is, one is practising as per Rogerian style, or in the style of Fritz Perls etc. etc.

I recognise that the various styles or methods of psycho-therapy may consist of more than the mere aggregation or combination of various *general communication skills*. However I think the use of this idea does help us to distinguish between two very different uses of communication skills.

Examples of *general communication skills* are the ability to listen, summarize, paraphrase and question; the capacity to use self-

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disclosure, silence, and confrontation; the abilities of acceptance and empathy; the ability to use the different kinds of body language such as eye movement and positioning of hands and arms and the ability to recognize neuro-linguistic cues².

Examples of styles or methods of counselling are those of Rogers³, Perls⁴, Ellis⁵, Berne⁶ and Carkuff⁷.

The purpose of this paper is to review how communication skills contribute to the diagnostic process, and no further consideration will be given to use of communication skills where such use is in itself therapeutic.

Finally in concluding this initial phase of the paper I believe it is important to note that at this time there is no single adequate theory and/or model of communication — either for general use or particular use in the general practitioner's consulting room.

It is possible that the work of Bandler and Grinder² will ultimately lead to such a theory and model, and time will provide the answer to this assertion.

A model of the diagnostic process

In order to assess how and where communication skills facilitate the diagnostic process, it is necessary to have a model of same in order to facilitate such analysis. It is proposed in this paper to use model of clinical reasoning initially proposed by Elstein et. al⁸ and subsequently developed by Elstein, Shulman and Sprafka⁹.

This model may be viewed in general terms as being an overall process wherein data is gathered about a particular patient and matched with data which already exists in memory. This process is facilitated by various kinds of cues.

This model does not place any significant emphasis on the nature of the cognitive functions which facilitate such processes as cueing and hypothesis generation (see Gagné¹⁰), but despite this limitation, the concepts outlined by Elstein and his colleagues provide a useful framework for analysing the ways in which communication skills contribute to the diagnostic process.

The components of this model are as follows:

Data gathering

This process is ongoing throughout the entire diagnostic pro-

cess, and encompasses collecting data by conversation, physical examination, investigations and the like. Some of these data may act as cues.

Cues and cued association

Cues are those events or items that provoke a further intellectual step. One such step may be the matching or association of an element of memory with the cue.

Thus the gait of a patient may cue the recall of a particular hip lesion before the patient has offered any information regarding the problem at hand.

This process can be conceptualised as 'cued-association' and may lead to the generation of a hypothesis re the nature of the diagnosis.

Early/tentative hypothesis generation

Generally three to five of these tentative hypotheses regarding the nature of the patient problem are generated in the first minutes of the consultation. These hypotheses have a significant guiding effect on the behaviour of the physician concerned.

Rank ordering of the tentative hypotheses

This process amounts to ordering the hypothesised diagnoses from 'most likely' to 'least likely'.

Testing of hypothesis

This amounts to conducting various cross checks on the primary and other hypotheses. These checks may be intellectual processes or involve the collection of further data by investigation or physical examination etc.

Verification of the hypothesis

At this time a single hypothesis is conditionally accepted.

Review of Hypothesis

This review validates the conditionally accepted hypothesis noted above. Further investigations etc. may be part of this review, and an important component of the data available at this time may be that information generated by the initiation of some kind of management regime e.g. the use of a particular drug for several days.

Binary decision making

This process of choosing one of two options occurs at many points throughout the process and appears to be a basic mechanism by which items are included, or excluded, from the diagnostic process.

Repeating the cycle

All or part of this cycle may be

repeated, according to the phase one has reached within the cycle, when such review appears to be indicated by the data at hand.

Let us now consider what *general communication skills* may contribute to each of these steps.

The contribution of general communication skills to the diagnostic process

Data gathering

The use of communication skills enhances the data base to which problem solving processes are applied in two major ways. Such use helps to establish what is the real problem; reduces the time required to reach a diagnosis by minimizing the time required to gather the relevant data.

A consideration of some examples drawn from experience will serve to validate these assertions.

A common consulting experience is what I would choose to call the 'Oh by the way Doctor' consultation. This is a consultation where you feel you have completed the patient contact, and you are in a process of ushering the patient from your consulting suite only to have the patient turn at the door and say 'Oh by the way Doctor.....' at which time you suddenly discover that what you have just dealt with was not the problem at all.

How to avoid such an outcome is well illustrated by a story recounted to me by a young physician who had trained with me in a Consulting Skills Workshop in the week immediately prior to the patient contact which she subsequently described to me.

During the Consulting (communication) Skills Workshop, this young physician had been impressed with the value of making responses which encouraged the patient to 'go on'.

She had not previously used such responses, tending to retreat to systematic questioning very early in any patient contact.

One response which she had practised during the previous week, and one which she found encouraged people to go on was merely to say 'yes...'

One of the first patients she saw following the workshop was a 34 year old woman who in response to the trainee asking her how she could help, replied: 'I've got this dreadful head cold, Doctor'.

To this the trainee replied: 'yes....', and the patient then continued:

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'Actually I've got these dreadful pains around the back of my head and my neck which I've had for a week or so now'.

The trainee, encouraged by this response, continued 'yes...' and after a pause the patient went on: 'Well actually, we're having this dreadful problem with my husband's mother'.

At this point the trainee was uncertain as to whether or not to make the same response on a third occasion, however encouraged by progress to this point, she replied 'yes....' and waited.

The patient continued: 'You know, my husband and I are not getting on too well at the present time'. Hardly believing the nature of the unfolding story, the young trainee decided non-the-less to risk yet again another 'yes....' response.

To her amazement this had a dramatic effect on the patient, who with great emotion proceeded to describe her concerns about her infertility, the various investigations and treatments which she had undergone for same, and the effect this was having upon her emotional state and the marital relationship.

This recounting is based on the story as told me by the trainee. I believe it validates the assertion that the appropriate use of communication skills is likely to enhance the process of defining the real problem, thereby facilitating the diagnostic process.

This assertion is further validated by research work such as that by Korsch et al.¹¹, which demonstrated that in a particular paediatrics clinic in North America only 24% of mothers' concerns were established by the consulting paediatricians.

The above case history of the use of four 'yes's' can also be used to validate the suggestion that the appropriate use of communication skills will reduce the time required to generate the data required to arrive at an appropriate clinical diagnosis.

This comes about in two ways. Firstly one does not get irrelevant or unnecessary data because one has applied inappropriate questioning to a relevant problem eg. by engaging in early systematic questioning — a process commonly engaged in by clinicians. Secondly one does not generate unnecessary data by the use of appropriate questioning applied to an irrelevant problem.

How does the use of communication skills bring about these cir-

cumstances? I would make the following suggestions.

Firstly the clinician concerned with communication sets out to establish rapport with the patient. The work of Korsch et al.¹¹ and other workers such as Ley¹², suggest that this is likely to enhance patient satisfaction, which will in turn enhance the kind of dialogue that occurs between the patient and doctor. This will, consequently, improve the nature of data generated.

Such rapport is established by simple techniques such as introducing oneself to the patient concerned. Even this simple step is not a common practice amongst the medical profession, and I have had significant debate within one workshop as to whether or not it was appropriate to introduce oneself by one's christian name — a procedure which I routinely adopt and find is welcome by my patients.

Secondly, such a clinician listens carefully to his patients. He also summarises or paraphrases back to the patient, statement made by the patient, in their own language. This is a powerful checking technique and leads to a great deal of clarification of the data base.

A recent example drawn from my own clinical experience is the instance of a depressed woman who I thought was asking 'why me?', but on stating this back to her she was able to say that this was not the case, and that the actual question she was asking was 'why is this happening to me now?'.

A further and significant point that aids in the establishment of the data base, is the fact that clinicians who have undergone communication skills training, and who also practise the use of these skills, come to realise, as did the trainee described above, that to wait in the initial phases of the consultation does not necessarily extend to the duration of the patient contact, or delay arrival at a diagnosis.

They are thus not anxious 'to get on with the job', thereby creating an unhurried atmosphere that allows the unsuspected to emerge.

Cues and cued-association

The essential characteristic of a cue is that it jogs or stimulates something in the mind/memory of the 'cued' person — in this case a clinician. However before it can exert this jogging effect, the cue must be able to be perceived.

It would be my contention that

communication skills training is probably the most potent training strategy for increasing one's ability to perceive.

This is so because it teaches one to observe. It stresses that one must pay attention to — body posture and gestures — the patient's mood — and the tone of voice.

It stresses listening, and the use of clarification techniques such as summarising. It teaches one not to write but to pay attention and so on.

An important indirect outcome of training in the use of communication skills is the nature of insight into self. This has been noted earlier, and it gives one the ability to 'listen' or to 'communicate' with oneself.

This allows one to eliminate various kinds of blocks and biases which distort the diagnostic process, which in turns helps one to avoid inappropriate diagnoses such as was the case in the following example.

As a second year resident I was undertaking a locum in a suburb of a large capital city in Australia, when I was asked to do a home call to an Italian family where one of the young children was suffering from an attack of asthma.

I undertook this call after completing several other calls on the evening in question, arriving home for a very late evening meal. I had barely finished this meal when I received another telephone call from the same house asking me to return to see the wife, who was also suffering from an attack of asthma.

This was hard to believe, given that I had only seen her about an hour earlier, and she seemed very well at that time. Thus in a somewhat querulous state I agreed to visit the house, but I was mildly frustrated at having to do so.

It was not easy to reach the house in question as I had to cross several major highways. My progress was also arrested by having to wait for a train to pass by me at a level crossing.

By the time I arrived at the house I was mildly angry, and in this querulous and aggrieved state I was confronted by not only the patient and her family but twenty or thirty or so of her near relatives and friends.

I was ushered through this grouping of people into a small bedroom, where the patient was propped up in bed. All followed me into the bedroom, and we all crowded around

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the bed.

At this point I experienced a great deal of tension, as in the poor light of the bedroom the whole environment took on a somewhat threatening aspect.

Having taken some history I was about to examine the lass's chest when she pushed me aside and squatted beside the bed to urinate into a hand held bowl. Whilst understanding her need, this caused me to feel some revulsion, and further added to my frustration, anger and anxiety.

I conducted the appropriate examination, noting that she was about 25 weeks pregnant, and came to the conclusion that she was suffering from asthma. I treated her in standard fashion for her broncho-spasm and left as quickly as possible.

The next morning at about 6.30 am when I was shaving, prior to going to hospital to perform an artificial rupture of the forewaters on another pregnant patient it suddenly dawned on me that my diagnosis was totally inaccurate, and that the patient had, in fact, been suffering from acute pulmonary oedema.

I rushed back to the house to have my worst fears confirmed. The patient had been transferred to a city hospital about three hours following my visit of the night before. She had mitral valve disease and had gone into acute cardiac failure as is often the case in the mid-trimester.

This experience taught me how dependent the diagnostic process can be upon one's emotional state. I would contend, again as the result of the experience of having undergone extensive training in communication skills, that the clinician trained in the use of such skills is likely to be more aware of his own prejudices, biases and emotional state.

It is also likely that as a consequence of these insights he will be able to control these tendencies and thus be better placed to make logical decisions.

He will consequently be more receptive to cues, more likely to check on them, and thus be able to validate their significance. His chances of being appropriately 'cued' by events occurring within the consultation are thus greatly enhanced.

It is fair to theorise on the basis of the diagnostic model presented in

this paper that the accuracy of diagnosis bears a positive relationship to the number of relevant cues perceived by the clinician concerned.

If this is so, then given that the appropriate use of communication skills will result in a greater perception of cues, it is reasonable to conclude that the diagnostic process will be enhanced for those clinicians using communication skills as a matter of routine.

Early/tentative hypothesis generation

The quality and nature of hypotheses generated is dependent in part upon the data collected and the cueing experience. Thus the same arguments as advanced above relating to those two points apply here. However, it is worth re-stressing some of the key points.

Firstly one's diagnostic process is likely to be more logical due to the increased control that one has over oneself, as an indirect consequence of engaging in communication skills training.

An aspect of such control not previously outlined is the consequence that because of one's increased open mindedness, one is less likely to discard negative data — i.e. data that do not fit one's favoured hypothesis.

This is a characteristic trait of human behaviour, and the discarding of such data may invalidate the hypothesis testing and verification stages of the model.

Other points worth reconsidering are the increased likelihood of the clinician focusing on the real problem, and the fact that he is likely to perceive an increased number of cues relevant to this problem.

Given that the diagnostic process can be viewed as the process of matching new data with existing data, then any limitation in existing data has profound implications for the quality of clinical decisions.

Thus any circumstance which leads one to up-date one's knowledge is indirectly facilitating the diagnostic process.

For similar reasons of comfort, I believe the clinician outlined above will also be able to postpone making clinical decisions when he has the feeling that he is not functioning at his best in a given situation.

Let us consider the situation where the feelings and thoughts generated in a family row go with one to one's next consulting session.

I believe that the clinician trained in communication skills will acknowledge this circumstance and take some preventive action to minimise its effect on his clinical decision making on that particular occasion.

In short such a clinician has a tolerance of uncertainty and ambiguity.

Finally, I believe that the use of communication skills promotes better problem solving strategies and thus hypothesis generation. This is so for all of the reasons given to the present, and the likelihood of such an outcome being the case is further increased by the following.

Because the clinician trained in communication skills is not necessarily busy with systematic inquiry and because he is prepared to sit back and listen etc. etc. — and because the patient is doing a great deal of talking — there is a great deal more time within the consultation for the clinician to think.

It seems fair to assert that the quality of problem solving must be enhanced where the time available for processing information is increased.

I believe we can also say that the clinician outlined is less likely to suffer premature closure in the development of hypotheses. I believe this assertion is well substantiated by the four 'yes's' story outlined earlier.

Finally the data to which problem solving strategies must be applied are likely to be more valid when generated by a clinician using a variety of communication skills. The fact is exemplified by the 'Why me?'/'Why me now?' example given earlier.

Rank ordering of tentative hypothesis

All I would say here is that for all of the reasons given so far, one's rank ordering process is likely to be more appropriate.

Testing of hypotheses

Once again all of those factors already noted operate at this stage of the diagnostic process.

At this step the clinician is often wishing to test his hypothesis with the

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patient. I would suggest that the use of communication skills could aid in this process by helping the physician to frame his statements in a language and style which makes the meaning clear, and does not raise any fears or antagonisms within the patient, thereby facilitating a more honest response to the physician's suggestions.

Let us take the example of the patient whom the physician believes is depressed, and to whom he might say, 'You're depressed Mrs. Jones' or 'Mrs. Jones, you're saying that you are sad and finding it hard to make decisions?'

I would contend that the second statement regarding the physician's hypothesis is more likely to be acceptable to Mrs. Jones. It demonstrates a number of communication skills such as paraphrasing and summarising, and the sensitivities within the physician which would suggest such an alternative, are a part of his ability to empathise with the patient.

Verification of the hypothesis

Once again most of the previously mentioned factors operate positively at this level. However part of the verification process may be the implementation of some kind of management programme (the use of drugs or some other series of steps) where the effectiveness of the regime is of itself a measure of the correctness of the original diagnosis.

A significant factor in most management regimes is the compliance of the patient with respect to the suggested programme.

A large body of research, most undertaken with respect to compliance to drug regimes^{12,13}, suggests as a rule of thumb, that in any given population about one third of patients will always be compliant, one-third sometimes, and one-third never.¹³

Ley¹² suggests that increased understanding of what is required, particular instruction that facilitates recall, and attention to factors that bring about increased patient satisfaction with the consultation, will all influence the extent of compliance in any given situation.

Clearly the attainment of such objectives as these is heavily dependent on the appropriate use of communication skills, and leads to the conclusion that the exhibition of such skills at this stage of the diagnostic

process would be of great advantage to the clinician.

Review of hypothesis

Here too most of the earlier arguments advanced are applicable. However in addition it is worth noting that communication skills training places a great deal of emphasis on the giving and seeking of feedback as a management strategy, and I would contend that physicians sensitised to this process will be much more likely to use it at all times, even where the problem is predominantly an organic one.

For example, it would be hard to believe that a physician so sensitised would leave so many expectations unfulfilled in the mother of a child, as was earlier reported in the work of Korsch et al.¹¹

Binary decision making

The process of choosing between options is facilitated where: the mind is clear at the time of making the choice(s); the data re the choices are appropriately defined.

I would contend, for reasons already given, that both of these requirements are facilitated in very great measure by the appropriate use of communication skills.

It thus follows that binary decisions made in association with such usage should be of enhanced quality.

Repeating the cycle

I have no further arguments to present under this heading, since the outcome will be dependent upon the combined effectiveness of all the previous steps outlined, and I have already specified where I see communication skills operating within these various components.

Teaching communication skills within Australia

In this section I would like to review briefly some of our experiences in teaching communication skills at a post-graduate level with trainees of the Royal Australian College of General Practitioners' Family Medicine Programme.

It needs to be stated clearly and unequivocally that training in such skills is required by all medical graduates. There then comes the question as to whether or not such training should occur in the undergraduate or post-graduate setting.

This is an important question, which so far as I am aware, has received very little attention from

those concerned with medical education in both settings.

Where is the most appropriate setting for what learning?

Our experience within FMP and the assimilation theory of Ausubel et al.¹⁴ suggests that some training must wait until the doctor has had the relevant clinical experience.

Perhaps the answer is that *general communication skills* can be taught in the under-graduate setting as they are germane to history taking and clinical problem solving, whilst training in the use of these general skills within the context of a particular method of counselling or psychotherapy is best addressed in the post-graduate setting.

Whatever the outcome of this deliberation one must eventually: teach the executive routine and practice the skill dependent upon this routine in a setting which provides feedback as to one's competence (cf. Gagné and Briggs¹).

Given this is the case one is then faced with further options regarding training. One may give the information first and organise practice based upon it, or, provide an experience which allows the participant to come to insights as to what he needs to know, subsequently providing him with the appropriate information and supervised practice.

This is a perennial question which bedevils educational institutions. It is summarised in the aphorism 'the part to the whole or the whole to the part?' and is also encompassed in the debate on the relative merits of discovery learning and verbal instruction.

I have reviewed these issues in an earlier publication,¹⁵ and I will not review them again at this time.

However within the Family Medicine Programme we have a distinct preference for the use of experiential or discovery learning because we believe we see both the expected learning and learning which could not be anticipated; learning which is perceived by the participant as being more relevant, and learning which we believe is associated with a greater retention time and a capacity to be used in a wider range of situations (generalisation).

Within our training programme we have tried a number of highly structured training workshops. These in-

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clude the transactional analysis '101' workshop¹⁶, the empathy training workshop of Tubesing and Tubesing¹⁷, Kagan's Interpersonal Process Recall¹⁸ and a locally designed workshop aimed at training in neuro-linguistic skills.

Our major unstructured experience, where the emphasis is on experiential or discovery learning, is provided within what we call the 'Basic Consulting Skills Workshop'.

This workshop is offered to trainee general practitioners who are experiencing their first term of general practice training, after they have had seven weeks of experience.

The workshop is modelled on the general practitioner consultation, and thus in the analogy provided by the workshop, the patient problem is the trainee's difficulty in using communication skills.

The facilitators of this workshop thus ask the young trainees on the first morning of the workshop 'How can we be of help to you in the area of communication skills?'

After seven weeks of general practice experience the trainees usually have a number of patient problems, and these are generally presented by them as being their problem. These practical problems are used as the stimulus to learning.

A number of techniques are used to dissect the nature of the problem, key amongst these being the use of role-playing with video-recording and recall of the 'patient' contact.

Solutions are worked out with the workshop facilitators. This results in the learning of the executive routine (information) of Gagné and Briggs¹ and the use of this information to execute the dependent communication skill.

This practice is generally supervised by the use of television as outlined above.

We do see the expected and unexpected learning noted above. What limited evidence we have suggests that retention is very good and that the trainee can generalise the skills learnt to new environments with facility.

A further potential gain inherent in the use of this workshop model, is that where the analogy is perceived, the trainee gains considerable insight into what kinds of feelings and con-

cerns the patient experiences each time he attends the general practitioner's surgery.

However despite our preference for this style of learning, it must be conceded that communication skills can be learnt in a variety of ways.

What is important is that various methods should be experimented with, and those most appropriate to the local environment should be selected from amongst the training techniques available.

My personal preference would be to teach these skills within special practices which are appropriately organised to teach communication skills in the context of the real doctor-patient consultation.

Such practices have to have appropriately skilled teachers attached to them, and also to have a number of unusual physical facilities in the form of one way mirrors and/or television recording and replay facilities.

The trainee in these circumstances has total responsibility for the outcome of each clinical contact and has experienced within the recent past, the material which is subsequently replayed from the televised recording and reviewed in association with the skilled teacher.

Within these practices the teachers can directly observe the particular patient-doctor interview, record this interview and subsequently replay the recorded experience in association with the trainee concerned, dissecting this doctor-patient contact for its particular learnings.

The same teaching method can be used to offer supervised practice of the communication skills which have been perceived as being deficient in the trainee under consideration.

I have described the requirements of these practices and the process of the teaching in two earlier papers^{19,20} and I will not detail these elements again.

However, I am convinced that it is crucial that the teacher in such settings must practice what he preaches.

It makes for difficult learning on the part of the trainee if he has just spent a session on empathy with his trainer, only to see his trainer, perhaps within a few minutes of the conclusion of the training session, being aggressively critical of a

secretary because she has not handled an incoming phone call appropriately.

Thus teachers in this area need not only to be competent in their knowledge, but also need to be competent personalities. This may be a critical and limiting factor in our capacity to provide such training for our trainees in the practice setting.

Summary

Using the clinical reasoning model of Elstein et al^{8,9} I have demonstrated how the use of general communication skills can enhance the diagnostic process.

In the light of this analysis one wonders why the incorporation of training in the use of such skills has been so long delayed within the medical sphere.

I have also outlined briefly some of our experiences in training in the area of communication skills, indicating that there are many avenues for teaching these skills, and raising the question as to where such skills are most effectively taught within the continuum of under-graduate and post-graduate medical education. □

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