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Neurolinguistic Programming: A Systematic Approach to Change

SUMMARY

Neurolinguistic programming (NLP) integrates advances in cybernetics, psychophysiology, linguistics, and information services. It has been used in business, education, law, medicine and psychotherapy to alter people's responses to stimuli, so they are better able to regulate their environment and themselves. There are five steps to an effective NLP interaction. They include 1. establishing rapport; the therapist must match his verbal and non-verbal behaviors to the patient's, 2. gathering information about the patient's present problem and goals by noting his verbal patterns and non-verbal responses, 3. considering the impact that achieving the patient's goals will have on him, his work, family and friends, and retaining any positive aspects of his current situation, 4. helping the patient achieve his goals by using specific techniques to alter his responses to various stimuli, and 5. ensuring the altered responses achieved in therapy are integrated into the patient's daily life. NLP has been used to help patients with medical problems ranging from purely psychological to complex organic ones. (Can Fam Physician 1984; 30:147-150).

SOMMAIRE

La programmation neurolinguistique (PNL) intègre les développements en cybernétique, psychophysologie, linguistique et services d'informations. Elle a été utilisée en affaires, en éducation, en droit, en médecine et en psychothérapie pour modifier les réponses des gens aux stimuli, pour qu'ils puissent plus facilement contrôler leur environnement et eux-mêmes. Une interaction efficace de la PNL comporte cinq étapes. Elles sont: 1. établir un lien; le thérapeute doit adapter ses comportements verbaux et non-verbaux à ceux du patient. 2. Obtenir des informations concernant le problème actuel et les objectifs du patient en notant ses modes d'expression verbale et ses réponses non-verbales. 3. Considérer l'impact que l'atteinte des objectifs du patient aura sur celui-ci, son travail, sa famille et ses amis, et retenir tout aspect positif de sa situation actuelle. 4. Aider le patient à atteindre ses buts par l'usage de techniques spécifiques pour modifier ses réponses aux différents stimuli, et 5. s'assurer que les modifications des réponses obtenues au cours de la thérapie soient intégrées au vécu quotidien du patient. La PNL a été utilisée dans le but d'aider les patients présentant des problèmes médicaux allant de purement psychologiques à des problèmes organiques complexes.

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OVER THE PAST ten years, neurolinguistic programming has been applied to the fields of business, education, law, medicine and psychotherapy. It is a selective integration of recent advances in cybernetics, psychophysiology, linguistics, and information services. It is essentially a recipe for proceeding, rather than a theory which claims to understand reality.

Historical Development

The originators of this model are John Grinder, a former professor of linguistics and Richard Bandler, a mathematician who also led Gestalt groups. At the University of California, Santa Cruz in the early 1970s they sought to delineate the communication patterns that enabled outstanding indi-

viduals in psychotherapy to be highly effective. Using direct observation and videotapes, they analyzed people such as Fritz Perls (Gestalt's founder), family therapist Virginia Satir, and Gregory Bateson (anthropologist and social psychologist).

Their first discovery was that Satir matched her predicates (verbs, adverbs and adjectives) to those of her clients without being aware she did so. Some clients would use mainly visual predicates, while others used auditory or kinesthetic ones. This led to the notion that for any person, one of the senses—seeing, hearing or feeling—is more highly valued and is reflected in the words he or she selects. When Satir matched her words with the predicates her clients used, they appreciated that she understood them. This created rapport, which made her interventions more acceptable.

Next, Grinder and Bandler discovered eye accessing cues,¹—movements of the eyes which may indicate whether one is using pictures, words and sounds, or feelings when thinking, remembering or learning (see Figure 1). For instance, when a right-handed person looks up towards the left, he is probably remembering visual images. Subsequently, Grinder and Bandler, after studying Milton Erickson, refined the linguistic patterns used by therapists to effectively influence people's behaviors.

Definition

NLP is the study of the structure of subjective experience. According to Stevens,²

"NLP is a detailed operational model of the processes involved in human behavior and communication . . . NLP is not itself a psychotherapy. Its principles can be used to understand, and make changes in *any* realm of human experience and activity . . . This technology is detailed and explicit, and can be easily taught and learned."

The process of NLP is suggested in its name: all behavior is the result of neurological processes; these processes are represented, ordered and sequenced into maps and strategies through verbal and nonverbal communication systems, and the component parts of the system are programmed to accomplish specific results. Behavior is programmed by sequenc-

ing neural representations of sights, sounds, feelings, smells and tastes. Every external stimulus is processed through internal representations, and a specific outcome is generated. Our fine sensory experiences are the basis for the strategies that we have for generating and guiding behavior. NLP concentrates on the form, not the content, of behavior.

Basic Presuppositions

Every model has assumptions inherent in its structure. These are explicit in NLP and have been found to enable practitioners of this approach to organize appropriate outcomes for clients and patients. These assumptions are not true, but merely useful as a guide. There are several points to consider about NLP.

1. The map is not the territory. We operate upon the world through our senses, but the representations we use to organize our experiences of the world are not the world itself; they are only neurological transforms that may or may not be accurate. Each person creates a unique map of the world. These maps should be judged not as being 'good' or 'bad' or 'right' or 'wrong', but rather by their effectiveness in assisting the individual to respond creatively—both internally and externally—to the world.

2. Mind and body are part of the same system and affect each other. Dilts³ states that

"Any occurrence in one part of the cybernetic system (such as a human being) will necessarily affect all the other parts of that system in some way. When the rules of interaction between the parts of the system are understood, the effects of the different parts of the system on one another can be patterned, predicted, and changed . . ."

3. The meaning of any communication is the response that it elicits, regardless of the communicator's intent.⁴ Both verbal and nonverbal communication elicit a response in another person, which is frequently one that was not intended. It is important to be able to notice his response and then alter your communication, if you are to communicate effectively.

4. People are capable of one trial learning. A therapist can teach a patient the association between one response and another, or between an external stimulus and an internal

response in one trial. This is called 'anchoring'.

5. All behavior is adaptive to the organism. This means that every individual makes the best choice available to him at a particular time, even though other people may not think so. Behind every behavior is a positive intent for the organism.

6. Each person has all the resources he needs in his personal history to achieve his desired outcome. Since the mind and body are part of the same system, it is the physician's or therapist's task to elicit from the patient valuable experiences and help him to apply what he learned from them in the present.

7. Resistance by the patient is a statement about the physician's or therapist's behavior. It is high quality feedback indicating that what the therapist is doing is not effective, and that he should change his behavior.

Sequence of An Effective Interaction

In the context of medicine, an effective interaction has five steps, which include.

1. Establishing rapport. This involves explicit procedures, based on matching verbal and nonverbal behaviors to the patients', and is a continuous process.

2. Gathering sensory information about the patient's present state (problem or symptom), and the desired state (outcome, goal or result). This can be done by being attentive to the patient's verbal patterns and nonverbal responses, such as visual accessing cues (see Figure 1), skin color, lip size, facial muscle tone, breathing rate and depth, postural and gestural complexes, and variations of tone, tempo, timbre and volume in the voice.

3. Assessing ecological considerations. These are crucial in this model, and *must* be assessed before any attempt is made to change the patient's present state. It is important to carefully evaluate the impact that accomplishing the desired state will have on the patient's internal personal and interpersonal system (work, family, friends). Any positive aspects of the present state must be preserved.

4. Helping the patient to evolve from his present to the desired state. This step requires the skill to utilize various explicit NLP techniques. A partial list of these techniques includes anchor-

ing,⁵ reframing,⁶ changing personal history⁷ and strategies.⁸ These are algorithmic interventions; if the specified sequential steps are followed, and the person using or following the steps has some requisite skill, then the outcomes are predictable.

Anchoring: This is a basic intervention. An 'anchor' is a stimulus-response relationship, and in other fields is analogous to what is known as classical conditioning. The therapist helps patients to respond differently to a particular stimulus.

Reframing: This is a technique which separates the intention of the behavior from the behavior itself, and then attaches to the original stimulus alternative behaviors which satisfy the original intention. This particular intervention is extremely useful in medicine, for difficult problems such as pain control and compulsive behaviors (e.g., overeating and smoking).

Changing personal history: The therapist uses the resources of the present to change the patient's feelings about past experiences which influence current behavior in an undesirable way. It is useful to apply this particular technique in treating hypertension.

5. Future pacing. This technique is used to integrate the desired state of experience into the patient's ongoing experience, to ensure that desired outcomes and resources continue outside of the therapeutic context.

Indications And Medical Applications

NLP is not an alternative to standard medical practice or the medical model. It enhances what physicians already do. Standard medical and surgical approaches, chemotherapy and drugs treat physiological causes of disease directly, but may fail to utilize the full potential that people have for control and self regulation. NLP is a way to increase the physician's skills and abilities so outcomes can be achieved which are worthwhile for him and for his patients. The only thing to consider is the utility of proceeding with this model. For example, if a patient has tonsillitis, it can probably be dealt with by a skillful practitioner of NLP and the tonsillitis influenced or healed. However, the time required for this may be two or three hours of intense interaction. On the other hand, prescribing penicillin is far quicker and probably much more appropriate for

this particular problem.

NLP has been used in virtually every diagnostic category of medicine, ranging from purely psychological difficulties such as anxieties, fears and depression to complex organic problems such as skin rashes, cardiac arrhythmias, asthma, control of the spread of malignancies and pain.⁵ No claims are made that this model is better than others. However, it is a model about modelling, and as such enhances any user's ability to more effectively impact his environment. Areas of possible application that are currently being explored are compliance and prevention. NLP could be used either to establish strategies to encourage health seeking behaviors, or to find why some patients have been able to recover easily and rapidly from a particular illness, model his strategies, and subsequently instill them in others who are either at risk, or in the early stages of particular ailments.

Skills Required to Use NLP

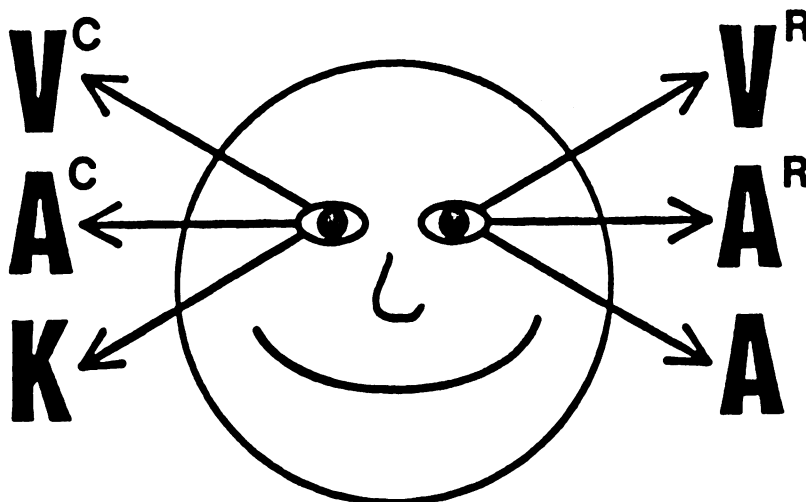
The fundamental requirement for using this model is the ability to set explicit outcomes, the ability to use your senses as feedback about progress towards a therapeutic goal, and the ability to be flexible in accomplishing that goal.

Developing sensory acuity in auditory, visual, and kinesthetic systems, coupled with practice in remembering which specific external response of another person is attached to a certain internal experience, is the basic requirement.

A second necessary skill is internal representational flexibility, so that you can easily shift from one representation to another, increasing the associations or translating between the sensory channels. For example, picture your favourite person or object, and then in your mind's eye systematically vary, for instance, the brightness of the picture, its size, its clarity, its distance from you etc. This is done not only for each representational system, but between them. (For example, if you *hear* a tone, a *color* is suggested to you.)

Finally, training and development in external behavior is important, because the physician or therapist needs to respond systematically to his patient by adjusting his behavior in relation to the patient's. Part of this task requires the ability to exhibit congruent behav-

Fig. 1. Visual accessing cues in a 'normally organized', right-handed person.



V^C Visual constructed images.

V^R Visual remembered (eidetic) images.

(Eyes defocused and unmoving also indicates visual accessing.)

A^C Auditory constructed sounds or words.

A^R Auditory remembered sounds or words.

K Kinesthetic feelings (also smell and taste).

A Auditory sounds or words.

ior to elicit explicit responses from the patient. Instructions for self-training⁹ can be utilized, although it is much easier to learn in a training session or workshop.

Another level of skill development or 'patterning' involves learning the various interventions and combining them in various ways so that they can be implemented with flexibility.

Conclusion

This survey of NLP has outlined historical development, given a definition, explained basic assumptions and provided an outline of sequential behaviors that have been useful in achieving worthwhile results in medical contexts. I want to remind you that you operate upon the world using the maps or representations that you make. It is tempting to believe that one's preferred model is the real and true one, but the 'map is not the territory'. A wise grandmother once told me "If you always do what you have always done, you'll always get what you have always gotten".

Acknowledgements

The term neurolinguistic programming ($\frac{+}{-}$) (NLPTM) is trademarked by the originators.

References

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Intermediate Prescribing Information

Trasicor[®]

Slow-Trasicor[®] tablets

(oxprenolol hydrochloride)

Antihypertensive Agent

Actions

TRASICOR (oxprenolol hydrochloride) is a non-cardio-selective beta-adrenergic-receptor-blocking agent which possesses partial agonist activity. It is used in the treatment of hypertension.

Indications

Mild or moderate hypertension. Usually used in combination with other drugs, particularly thiazide diuretics, however, may be tried alone as an initial agent in those patients whose treatment should be started with a beta-blocker rather than a diuretic. Oxprenolol hydrochloride therapy should start using TRASICOR (regular formulation), and once the maintenance dosage has been established, SLOW-TRASICOR may be substituted (see *Dosage & Administration*).

The combination of TRASICOR with a diuretic and/or peripheral vasodilator has been found to be compatible and generally more effective than TRASICOR alone. Experience with other antihypertensive agents has not shown evidence of incompatibility.

Not recommended for the emergency treatment of hypertensive crises.

Contraindications

Bronchospasm (including bronchial asthma), allergic rhinitis during the pollen season, sinus bradycardia and greater than first degree A-V block, right ventricular failure secondary to pulmonary hypertension, congestive heart failure, cardiogenic shock, anesthesia with agents that produce myocardial depression, e.g. ether.

Warnings

a) Cardiac Failure

Special caution should be exercised when administering TRASICOR to patients with a history of heart failure since inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure.

At the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely. TRASICOR does not abolish the inotropic action of digitalis on the heart muscle, however, the positive inotropic action of digitalis may be reduced by the negative inotropic effect of TRASICOR when the two drugs are used concomitantly. The effects of beta-blockers and digitalis are additive in depressing A-V conduction. If cardiac failure continues, despite adequate digitalization and diuretic therapy, TRASICOR therapy should be immediately withdrawn.

b) Abrupt Cessation of Therapy with TRASICOR

Warn patients against abrupt discontinuation. There have been reports of severe exacerbation of angina and of myocardial infarction or ventricular arrhythmias occurring in patients with angina pectoris following abrupt discontinuation of beta-blocker therapy. The last two complications may occur with or without preceding exacerbation of angina pectoris. When discontinuation of TRASICOR is planned in patients with angina, TRASICOR should be substituted for SLOW-TRASICOR and then the dosage should be gradually reduced over a period of about two weeks and the patient should be carefully observed. The same frequency of administration should be maintained. In situations of greater urgency, TRASICOR therapy should be discontinued in stepwise manner under closer observation. If angina markedly worsens or acute coronary insufficiency develops, it is recommended that treatment with TRASICOR be discontinued promptly, at least temporarily.

c) Various skin rashes and conjunctival xerosis have been reported. A severe syndrome (oculo-mucocutaneous syndrome) whose signs include conjunctivitis sicca and psoriasisiform rashes, otitis, and sclerosing serositis has occurred with the chronic use of one beta-adrenergic-blocking agent, practolol but has not been observed with TRASICOR or any other such agent. Physicians should be alert to the possibility of such reactions and should discontinue treatment in the event that they occur.

d) Severe sinus bradycardia may occur; in such cases, dosage should be reduced and the use of atropine and isoproterenol considered.

e) TRASICOR may mask the clinical signs of continuing hyperthyroidism or its complications; therefore, abrupt withdrawal of TRASICOR may be followed by an exacerbation of the symptoms of hyperthyroidism, including thyroid storm. TRASICOR does not alter thyroid function tests.

Precautions

a) In patients prone to non-allergic bronchospasm (e.g. chronic bronchitis, emphysema), TRASICOR should be administered with caution since it may block the bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta₂ receptors.

b) Administer with caution to patients subject to spontaneous hypoglycemia or to diabetic patients (especially those with labile diabetes) who are receiving insulin or oral hypoglycemic agents. Beta-adrenergic blockers may mask the premonitory signs and symptoms of acute hypoglycemia. Dosage of antidiabetic drugs may need to be adjusted.

c) Adjust dosage appropriately when used in conjunction with other anti-hypertensive agents.

d) Closely monitor patients also receiving catecholamine-depleting drugs, such as reserpine or guanethidine. The added beta-adrenergic-blocking action of this drug may produce an excessive reduction of sympathetic activity.

e) Appropriate laboratory tests should be performed at regular intervals during long-term treatment.

f) TRASICOR should be withdrawn gradually following the recommendation given under Abrupt Cessation of Therapy (see *Warnings*).

Available evidence suggests all clinical and physiological effects of beta-blockade are no longer present 48 hours after cessation of medication.

In emergency surgery, effects of TRASICOR may be reversed, if necessary, by sufficient doses of such agonists as isoproterenol or levaterenol.

g) *Usage in Pregnancy and Nursing Mothers:* Not recommended in pregnancy or lactation. Oxprenolol hydrochloride passes into the breast milk.

h) *Usage in children:* Although experience is limited, TRASICOR is not recommended for pediatric use.

i) After the active substance has diffused out of the insoluble core of the SLOW-TRASICOR tablet, the empty matrix is excreted in a softened form and may be found in the feces.

Adverse reactions

Cardiovascular:

Congestive heart failure (see *Warnings*); pulmonary edema, cardiac enlargement; secondary effects of decreased cardiac output which include: syncope, vertigo, lightheadedness and postural hypotension; severe bradycardia; lengthening of PR interval; Second and third degree A-V block; sinus arrest; palpitations; chest pains; cold extremities; Raynaud's phenomenon; claudication; hot flushes.

Respiratory: Shortness of breath, wheezing, bronchospasm, status asthmaticus.

Central Nervous System: Headache, dizziness, anxiety, mental depression, nervousness, irritability, hallucinations, sleep disturbances, including nightmares and insomnia. Tinnitus, weakness, sedation, vivid dreams, vertigo, paresthesia and slurred speech.

Gastrointestinal: Diarrhea, constipation, flatulence, heartburn, anorexia, nausea and vomiting, abdominal pain, dryness of mouth.

Allergic/Dermatological: (see *Warnings*)

Rash (psoriasisiform and exanthematic); dry skin, pruritus; sweating.

Ophthalmological: Conjunctivitis, dry eyes, itching eyes, blurred vision.

Miscellaneous: Impotence, decreased libido, nasal stuffiness, weight gain.

Clinical Laboratory: Elevated transaminases, BUN, alkaline phosphatase and bilirubin have occurred in some patients. Thrombocytopenia and leucopenia, and hypoglycemia have also been reported rarely.

Symptoms and Treatment of Overdosage

Symptoms: bradycardia, congestive heart failure, hypotension, bronchospasm, and hypoglycemia.

Treatment: Discontinue TRASICOR and observe patient closely. If required, the following therapeutic measures are suggested:

1. Bradycardia: Atropine or another anticholinergic drug.
 2. Heart block (second degree or total): Isoproterenol or transvenous cardiac pacemaker.
 3. Congestive heart failure: Conventional therapy.
 4. Hypotension (depending on associated factors): Epinephrine rather than isoproterenol or norepinephrine may be useful in addition to atropine and digitalis.
 5. Bronchospasm: Aminophylline and/or isoproterenol; or a beta₂-adrenergic agonist.
 6. Hypoglycemia: Intravenous glucose.
- Large doses of isoproterenol can be expected to reverse many of the effects of excessive doses of TRASICOR. However, the complications of excess isoproterenol should not be overlooked.

Dosage and Administration

Initial Dosage: Initiate with TRASICOR (regular formulation), 20 mg t.i.d., followed by upward titration of the dose on a t.i.d. basis, with increases of 60 mg per day at one- to two-week intervals until adequate control of blood pressure is obtained.

Maintenance Dosage: Once the optimal dose has been established, the total daily dose of TRASICOR (regular formulation) may be given on a b.i.d. schedule, although no comparison studies between the t.i.d. and b.i.d. regimen have been carried out. Alternatively, an equivalent single daily dose of SLOW-TRASICOR may be substituted, and should be taken in the morning. SLOW-TRASICOR tablets should be swallowed whole.

Usual Daily Dose: 120-320 mg, should not exceed 480 mg.

Availability

TRASICOR 20 mg tablet: white, round, slightly biconvex with bevelled edges, film coated. Imprint on one side: CIBA. Imprint on the other side: SR. Bottles of 100 tablets.

TRASICOR 40 mg tablet: white, round, slightly biconvex with bevelled edges, film coated. Imprint on one side: CIBA. Imprint on the other side: AI, separated by a score. Bottles of 100 and 500 tablets.

TRASICOR 80 mg tablet: light yellow, round, slightly biconvex with bevelled edges, film coated. Imprint on one side: CIBA. Imprint on the other side: CG, separated by a score. Bottles of 100 and 500 tablets.

SLOW-TRASICOR 80 mg tablet: light red, round, slightly biconvex, film coated. Imprint on one side: CIBA. Imprint on the other side: BEB.

SLOW-TRASICOR 160 mg tablet: white, round, slightly biconvex, film coated. Imprint on one side: CIBA. Imprint on the other side: BNB. Bottles of 50 tablets.

Product Monograph supplied on request.