



# DML—DIAGNOSIS MODELING LANGUAGE

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## Introduction

Many students and practitioners do not like to deal with uncertainty. Too often we directly jump to a pattern (e.g. Gān Qì Yù) or even a herbal formula with just a few symptoms and signs in our hands. No clear diagnosis statement and no clear treatment principle. After herbal formula or acupuncture points are determined, it is not always easy to let go of it and to see that other patterns might be more appropriate. Everything is now focused around the 'hypothetic' pattern. The question "why this pattern" often ends in assumptions (that were made) in order to support the found formula or points.

DML (Diagnosis Modeling Language™) will not change people, but it does offer a more structured and stepwise process from symptoms and signs to treatment. This allows students, teachers, and practitioners to define clear relationships and structures that were overseen or even missed before. Next to that the models serve as an excellent communication tool.

Even when a method or modeling language is complete, the managers of a

clinic and practitioners might react with self-fulfilling prophecies, as the claim that they

- **Can't** follow it
- **Won't** follow it
- **Don't** want to follow it
- **Aren't** going to agree with it
- And it **isn't** perfect yet!

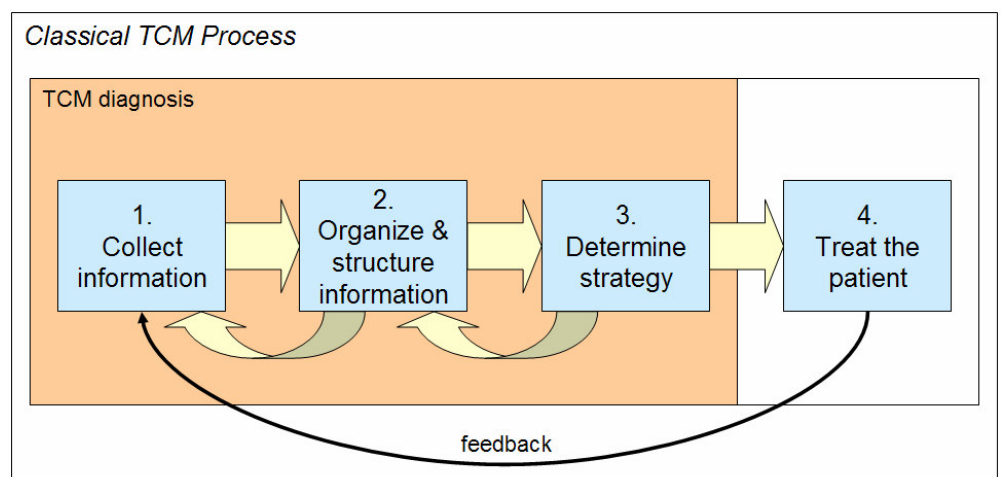
There always is a build-in resistance to change. This is normal. But if you as a practitioner want to grow, you have to change constantly. Change is an important ingredient of the Chinese Medical Philosophy (Yi Jing).

Diagnosis in Traditional Chinese Medicine covers a wide area of different aspects. There are three major process steps in diagnosis:

1. collect information using the four methods
2. organize and structure the information (pattern identification) leading to disease patterns
3. determine strategy leading to treatment method/principle

Step 3 connects with Treatment.

Figure 1.  
Four major steps  
TCM.  
Three steps in  
Diagnosis





Over 300 disease patterns can be identified using thousands of symptoms and signs.

It does not need any explanation that it is quite difficult to master all of this in just a few years.

DML (Diagnosis Modeling Language) is created to:

- assist students in learning TCM diagnosis in a structured way
- assist teachers in explaining all aspects of TCM diagnosis
- assist practitioners in complex cases.

### The need for models

In order to make TCM education more effective and to raise the level of quality, a more structured approach is needed. There also is a need to professionalize TCM if it wants to maintain its position because nowadays the policies of the government and health insurance companies regarding health care, especially that of 'alternative medicine' are rapidly changing.

DML is created to satisfy those needs. Models do not serve as a straight jacket, but as a tool to visualize items of interest and relationships between those items.

The advantages are extensive, for example:

- increased readability
- organic approach
- relationships become more clear
- common communication model
- consensus between group members in a study group or a clinic
- finding a more effective treatment
- clear structure
- effective teaching model
- effective learning and studying tool (e.g. a group of students solving a case study)
- effective for complex cases

- clear process steps
- increased memorization of structures, relationships, etc.
- your own knowledge base
- model for charting diseases like SARS. These models improve and increase communication and understanding between different departments, groups, etc.
- A drawing says more than a thousand words.

Next to that, DML is fun to learn and easy to use.

### DML Models

In this article I will not discuss all the different models in detail. Instead I will give an example to demonstrate its readability.

DML has three models. A Disease Information Model (DIM), a Pattern Identification Model (PIM), and a Treatment Principle Model (TPM).

For complex cases, these models are created separately, but are connected to each other. In more simple cases one model will suffice.

### Examples

Some cases are small enough to fit on one page, which gives a very nice overview of what it is all about.

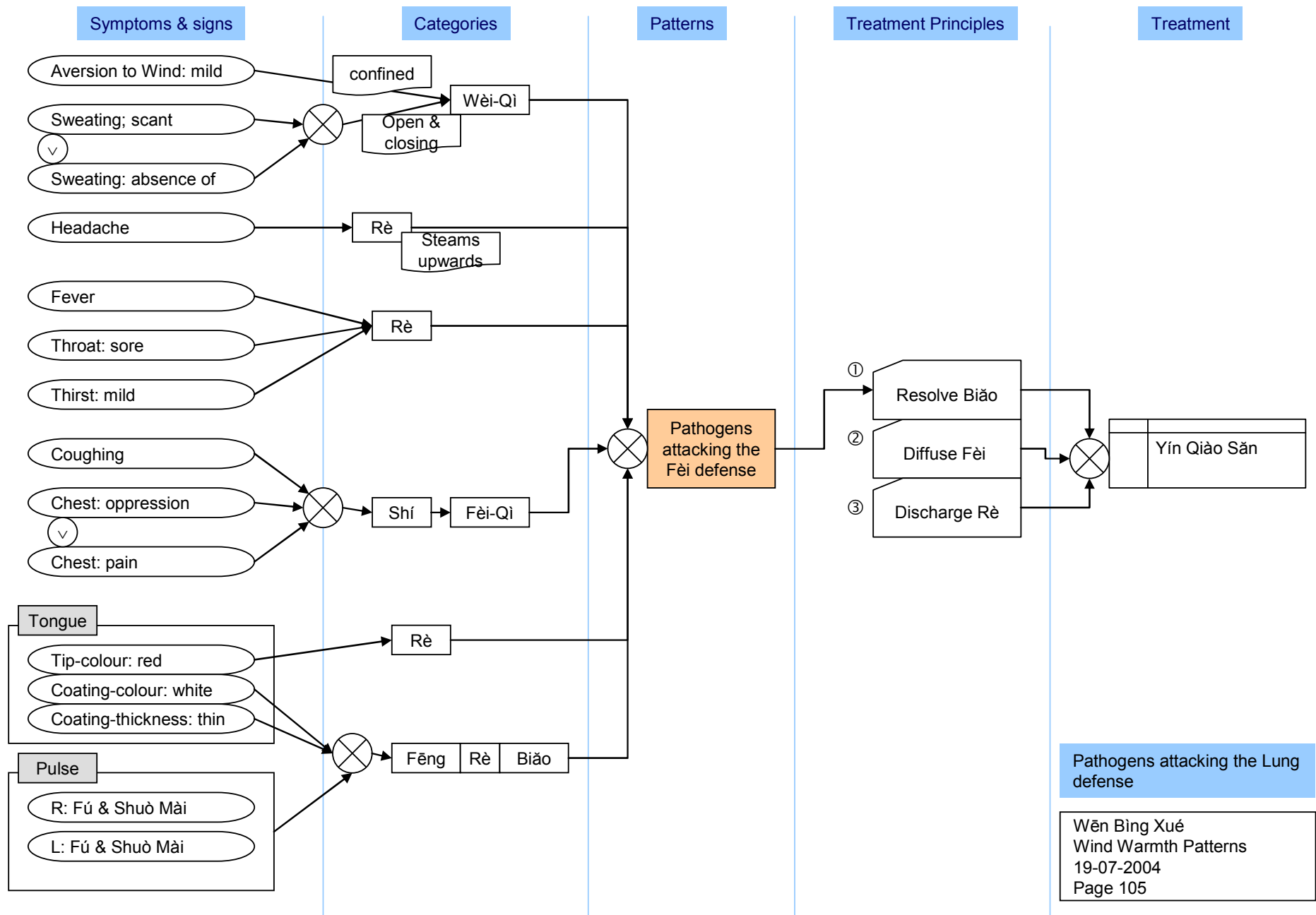
The next page shows a model which has been created from a case in the Wēn Bīng Xué (Warm Diseases).

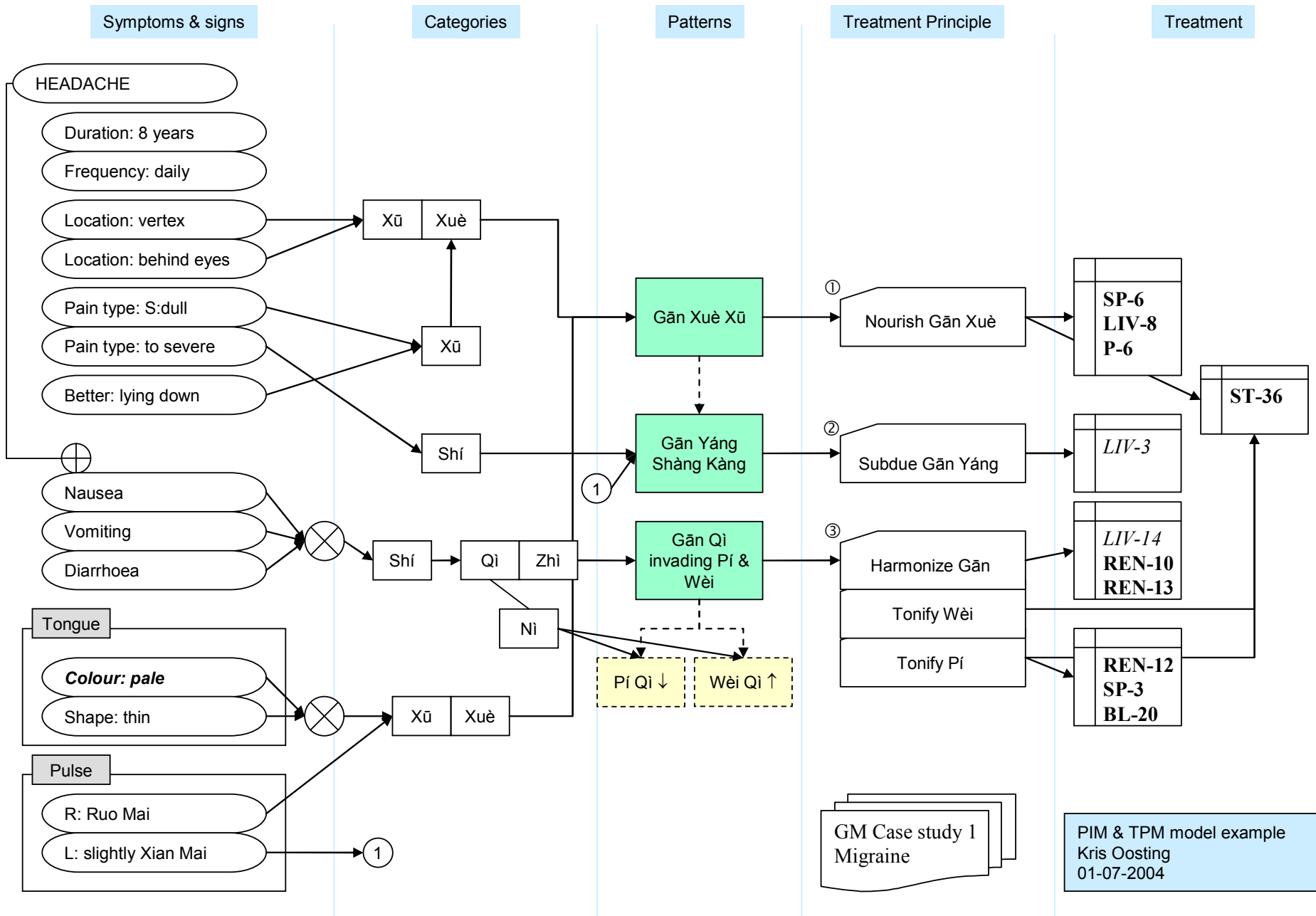
This example shows the relations between different items like symptoms and signs, (bāgāng) categories, patterns, treatment principle, and treatment. A complete overview on one page.

Thus all four process steps are actually represented.

A legend of the used symbols can be found on the next pages as well.

Another page shows a case study from *The Practice of Chinese Medicine* from G. Maciocia.

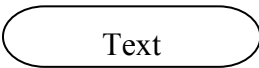
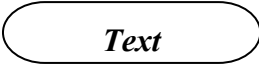

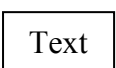
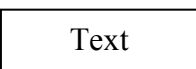

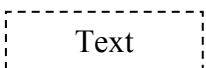
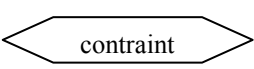









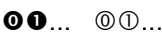




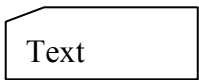
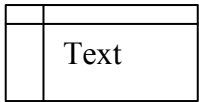


## Notation Set

The notation set is as follows:

<b>Symbol</b>	<b>Name</b>	<b>Description</b>
	Sign or Symptom item	The sign or symptom mentioned by the patient or noted by the practitioner.
	Key Sign or Symptom item	The key sign or symptom mentioned by the patient or noted by the practitioner. Important in the diagnosis context.
	Sign or Symptom Group	To indicate a symptom or sign group. The underlying symptoms and/or signs belong to this group
	Category item	To indicate a category from the Bā Gāng, the vital substances, etc.
	Pattern	A (Disease) Pattern.
	Main Pattern (can have a colour)	The Main (Disease) Pattern. Guiding the treatment principles.
	State or Result	A pattern can lead to this state or result.
	Constraint/Condition	A constraint or a condition.
	Connector	To connect lines on the same page. Used when there are too many crossing lines. A so called on-page connector. Connectors that connect with each other have the same number.
	Join	To group a few signs and/or symptoms together if they form a group that leads to the same Category Item or Pattern.
	Plus	To model “accompanied with”



<b>Symbol</b>	<b>Name</b>	<b>Description</b>
	OR	To model "A symptom OR another symptom".
	Comment or Note	To add a comment to any item in the model. Contains free text.
	Ranking Symbol	To indicate a rank or a certain order of items.
	Category Connection	Connects two category items that belong to each other.
	Normal Connection	Connection traversed only in one direction.
	Cause Connection	One pattern influences or causes another to exist.
	Reference	Reference to a document, book, etc.
	Treatment Principle Item	The treatment Principle. Can contain only one treatment principle.
	Treatment Item For acupuncture: <b>Bold</b> text indicates tonifying technique <i>Italic</i> text indicates reducing technique Normal text indicates harmonizing	A treatment item can contain: one or more acupuncture points, one or more single herbs, one or more herbal formula.

The notation set is quite simple and easy to remember.

The book on DML is scheduled for winter 2005. It has three sections. Part I—Theoretical Basis, dealing with the theory behind the models, notations, guidelines, how to build a model, etc. Part II—Applications explains how to use DML in real life situations. It gives many examples for simple and complex cases, for classroom situations

(teaching), for clinics, management of a DML project, and models of the Shāng Hán Lùn (Cold Diseases) and Wēn Bìng Xué (Warm Diseases).

Part III describes the process and gives many guidelines.

Yes, software to support DML is under development as well.

In the next journal more on the TCM process (maturity).

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