Chronic Disease Prevention With TLM
(Total Lifestyle Modification)

What is your impression of health problems for Thais?

Firstly, the demography of illness for Thais has changed dramatically during the last 35 years. Those common diseases when I was a med student such as typhoid, cholera, tetanus, diphtheria are nearly all gone. All chronic non-communicable disease such as ischemic heart disease, diabetes, hypertension, chronic kidney disease are now emerging rapidly. The national statistic also confirms my impression. The latest survey showed that chronic non-communicable disease is the leading cause of death (32.4%).

Secondly, Thai people now a day seem to be the different type of people from those lived in the old day. For instance, cholesterol is nearly an unknown word when I was med student. I firstly saw ischemic heart disease patient when I nearly graduate from med school, and the whole of my classmates were gathered to see this very patient because our instructor concerned that we might not have chance to see such disease again in years to come. Now a day more than a third of Thai adults have hypercholesterolemia in addition to other major risk factors for chronic non-communicable disease. In 2003 there was a good study published in European Journal of Cardiovascular Prevention which showed that 39.8% of Thais had dyslipidemia (hypercholesterolemia) required antilipid medication, 23.7% had hypertension, 34.6% were pre-diabetic (blood sugar level more than 100 mg/dl). My own study on asymptomatic 3,117 Thai adults who came forward for annual physical at Phayathai Hospital showed that 57.6% had hypercholesterolemia, 29.9% had hypertension, 35% were obese, 34.6% were pre-diabetic plus 13.3% were already had diabetes.

Does statistic really imply anything?

We are talking about the risk factors leading to chronic communicable disease. It implies that in the future our hospitals will be over-numbered by the patients of such chronic disease as ischemic heart diseases, stroke, diabetes, chronic kidney disease etc. My view is probably not yet pessimistic enough. The WHO forecasted that in the year 2020, which is only 8 years away, at least 90% of the whole world’s ischemic heart disease patients will be in Asia. I simply believe that. A few years ago I visit NICOVD, the biggest heart center of Pakistan. They had nearly 500 heart attack cases coming in each day. That number sounds crazy. But it is true.

But with all the modern medical treatment we already have here in Thailand, why concern?

Well, there is another good study called EuroAspire, published in The Lancet in 2009. In this research they followed 13,935 heart patients for 12 years. All of them were treated in 22 good and modern hospitals in Europe. In turned out that after 12 years of treatment patients got worse. The patients who are obese increase from 25% to 33%, those with hypertension increase from 32% to 43%, those with diabetes increase from 17% to 20%. The point is that modern medical treatment doesn’t help much when things come to chronic non-communicable disease.

If modern treatment does not help much, is there any other way round to deal with these diseases?

The answer may lay on numerous health behavior research. For instance, an American cardiologist called Dean Ornish did one well-designed research. He randomized heart patients into two groups, one just did things as usual in conventional heart treatment, another one did the total lifestyle modification including regular exercise, change diet toward low calories, manage risk factors such as quit smoking. He follow both groups using cardiac catheterization to quantify the severity of coronary lesion in the heart. The result at the end the first year and the fifth year is very clear-cut. Those who did things as usual had progressive disease with more severe coronary lesion and more symptoms and admission, while those who did total lifestyle modification had improved disease, less narrowing at the artery, less symptoms, and less admission. The research, firstly published in The Lancet and secondly published in JAMA, is a solid evidence to prove that ischemic heart disease can be regressive or improved substantially by total lifestyle modification.

Another study worth mentioning is called DPPRG published in The New England Journal. In this research they randomly divided 3,234 pre-diabetic patients into 3 groups. Group 1 did things as usual. Group 2 got diabetic tablets, group 3 did total lifestyle modification. It turned out that group 3 who did total lifestyle modification achieved highest diabetic prevention rate, better than giving medication, and much better than doing nothing. Here again the result in short is that total lifestyle modification is the best way to prevent diabetes.

Can you make it a bit more clear, what is total lifestyle modification?

In medical circle we make it short as TLM. It means to change the way we live our life totally or completely, at least in term of exercise, diet, stress management, and other health risk management.

In term of exercise, we change ourselves from being sedentary, couch-potato sort of guys, to become a people actively doing exercise up to standard level. When I said exercise up to standard level I mean doing aerobic exercise up to moderate intensity (suff until not able to sing) continuously (for at least 30 minutes) and regularly (at least 5 times a week) plus doing strength (muscle) training at least twice a week. In term of diet, we change our diet from high calories low fruit and vegetable diet toward low calories high fruit and vegetable diet. To combat the high
calories in USA they use a slogan SoFAS. The initial part SoF is a short for solid fat which means trans fat in such industrial food as cake, cookies, crunchy, magarine, coffee cream etc. It is now well established in medicine that trans fat is the worst edible fat of all, even worse than saturated animal fat. The last part of this slogan AS is a short for added sugar, referring to high amount of sugar put in all kind of commercially available soft drink.

In term of stress management, we re-arrange our time table in such a way that we get enough sleep and learn to response to external stimuli in life in more relax way. Among the popular relaxation tools include yoka, taichi, meditation, muscle relaxation etc.

In term of health risk management we identify our own health risks using simple tools or health index such as body mass index, blood pressure, blood cholesterol, smoking, alcohol etc. Once we know our own health risks then we learn to lessen it. manage it.

In summary TLM, is changing the way we live our life totally at least including exercise, diet, stress management, and other health risk management. The point is that we do all this by ourselves.

But a lot of people they are already ill. That it is probably too late to talk about prevention, right?

The word prevention may create a bit confusion. The fact is that a lot of health promotion research were done in chronic disease patients and the result is still the same i.e. health promotion helps reverse or at least slowdown the progression of the disease. In medicine we coin another, if not more confusing, word called "SECONDARY PREVENTION"

The intention is to tell all chronic patients that total lifestyle modification (TLM) is still very helpful, sometimes is the only tool, to make them get better from the chronic disease be it the heart disease, diabetes, chronic kidney disease, stroke, or even some type of cancer. So TLM is the very way to go for health in the future for either ordinary healthy Thais or the patients.

Do you use concept of secondary prevention in your hospital?

Sure. But admittedly we are still at the beginning of things. Phyathai 2, similar to other modern tertiary care hospital, fragments her service into numerous subspecialties. To bring TLM into medical practice guidelines for chronic disease we need a person or a team to orchestrate all these things for each patient. We have tried quite a few model. One model I am working at is to assign a family doctor and a family nurse for each patients or each family. Of course, such labor intensive scheme needs a lot of supporting tools. At the moment we are constructing a place called “Health Promotion Hall” where our patients and their families can learn about TLM by themselves. In that hall they can also join such activity as strength training exercise class, low calories cooking class etc.

One important point is that in each year most patients spend about 5,000 waking hours outside the hospital while spend only a few waking hours in the hospital. We are looking at automate hovering, I mean to use information technology to help patients achieve their health goal outside the hospital. We have come to the point that now a day our doctors can check their patients’ record through their mobile phones so that they can update the information immediately before talking to their patients over the phone. There are a few more things we are testing. One thing I can say for sure is that we will use secondary prevention as a main direction to help our patients live the longer quality life.