The PENSA 2017 Chomchark Chuntrasakul Professorial Lecture, Manila, Philippines

The Clinical Nutrition Fellowship Program - the key to the hospital based clinical nutrition implementation in the Philippines

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Welcome to the Chomchark Chuntrasakul Professorial lecture. Just as there are seven days in a week we, in PhilSPEN (Philippine Society of Parenteral and Enteral Nutrition), have seven reasons why we owe him thanks. First for founding PENSA (Parenteral and Enteral Nutrition Society of Asia) in 1955, second for being a great leader, third for his vision of Asians working together for excellence in the science and practice of clinical nutrition, fourth for being a researcher in basic and clinical nutrition, fifth for being a generous soul, sixth for being a model citizen, for which he received so much accolades, and a great husband; and finally seventh, for being a friend. Let us therefore stand, raise our hands and say, “Cheers to the Professor!”. (Figure I)
The topic for this lecture is “The Clinical Nutrition Fellowship Program - the key to the hospital based clinical nutrition implementation in the Philippines”. I will start by talking about the journey of clinical nutrition in the Philippines. (Figure 2) It includes my experience in St. Luke’s Medical Center, Quezon City, Philippines, where I got involved in the work in nutrition. In 1984 the nutrition committee of the hospital was launched and within ten (10) years, the following were realized: the diet manual was completed and the TPN team was organized. From a “lone ranger” status, clinical nutrition interest became a “team effort”.

By 1995 the first prevalence of malnutrition was reported. This was published in the local hospital medical journal and for the first time everyone realized that every unit had a malnourished patient. The hospital director was shocked to see it was his unit (neurology) which had the most number of malnourished patients. (Figure 3)
Events moved faster after that. Within a period of five years prevalence of malnutrition reports became a regular activity, the current set-up of the nutrition team was formally organized with the dietitian able to write on the doctor’s order sheet, then perform and document calorie counts of identified patients. This was a first. As the volume of patients seen increased exponentially we had no choice but to computerize the whole system. This happened in year 2000. Computerization of the clinical nutrition program was done and now we had a daily nutrition surveillance system with the capacity to identify the malnourished and get the nurses to take the height and weight of those patients they missed. (Figure 4)
The results were phenomenal – every day we now had a list which identifies the BMI of every patient in every unit and which ones had no height or weight; and to correct it. In time our statistics of “none entries” have declined from 20% to less than 5%. (Figure 5&6)

All of these were a welcome development in the field of clinical nutrition so that we were encouraged by colleagues to report it – which we did. The article was published in 2006. (Figure 7)

The whole timeline from the establishment of the nutrition committee to the computerization of the clinical nutrition process covered 16 years. From then on up to today, this is the current set up of the clinical nutrition program in St. Luke’s Medical Center. All patients are screened and those who are identified to be “nutritionally at risk” and “high risk” will be managed by the clinical nutrition service section. The obese and those with weight related problems are referred to the Weight Management Center. The process is completed within 48 hours. (Figure 8)
The clinical nutrition program design was patterned after the 1995 ASPEN Board of Directors’ clinical nutrition process flow. The idea has not changed much and today’s modifications were based on the team concept. The nurses now do the nutrition screening process. The unit secretary encodes the list of “nutritionally at risk” patients which the dietitians and physicians of the Clinical Nutrition Service receive. They then go to the identified patients and perform nutritional assessment. They make the nutrition care plan for the “high risk patients” and when the plan is approved by the attending physician this is implemented. The whole team from the nurses, dietitians, pharmacists and physicians become involved in the monitoring process until the patient is discharged. In essence, nutrition is now embedded in the overall patient care process. The goal of the whole system was to reduce the volume of patients targeted for nutrition care and maximize resources for the very sick ones like the ICU patients. This is the work cut out for the nutrition team in the institution. (Figure 9)

Clinical nutrition process/services

- All admitted patients are nutritionally screened by the nurses
- All nutritionally at risk patients are assessed by the dietitians
- All high risk patients are given nutrition care plans by the clinical nutrition physicians/dietitians
- Monitoring (nurses, dietitians, pharmacists, physicians)
- Nutrition care plan modification / Discharge

Figure 9. The updated clinical nutrition process

Today these are the forms that are used for the clinical nutrition process: first is the nutrition screening form (which was adopted from the validated NRS 2002 form), (Figure 10, click to view) next is the SGA-based nutrition
assessment form which was validated by PhilSPEN through the clinical nutrition fellowship training program, (Figure 11, click to view) the nutrition care plan was designed in a check list format in order to develop the habit among the caregivers and (Figure 12, click to view) the nutrient and fluid balance form where the following are documented – calorie and protein balance and most important, the daily and accumulated fluid balance. (Figure 13a, click to view) This is the final report for the attending physician to evaluate. (Figure 13b)

By the late 1990’s there were requests from medical and non-medical nutrition advocates and institutions to develop this whole system into a training program because it answered the long-awaited dream to include nutrition in daily patient care. This dream became a reality in year 2000. The clinical nutrition fellowship training program is a two-year course with the following features: initially applicants were required to finish a residency training program from any discipline, but today it is more rigid because they are now required to be board certified from their main sub-specialties. These are the areas of training – knowing the mechanics of the whole clinical nutrition process, nutrition team development, research and involvement in the PhilSPEN growth and development (=as part of the congress work force). (Figure 14)
This is what is seen daily in the Clinical Nutrition Service office. Everyone is doing: a) patient care analysis, b) discussion of pathophysiology of the patient’s problems, c) overall care planning and d) making follow up rounds of the patients. Case discussions are done with journal article reviews and evidence-based judgment calls are encouraged. These are the images captured through the years (please click): 2006, 2009, 2017 and the team today.

We go back to 2004. These are the people who organized the first congress of the Philippine Society of Parenteral and Enteral Nutrition. They look young then (this was taken 13 years ago), but in terms of productivity in organization and research they were "real pros." (Figure 15)
This study on ICU patients’ intake was published in 2006, but the implications of their findings are still relevant today since critical care nutrition is still being evaluated and analyzed in terms of rationale and impact. Inadequate protein intake in ICU patients on the third day of admission still exists today wreaking havoc on clinical outcomes. (Figures 16&17)
The involvement of one of the august universities in the country in clinical nutrition even made the goals of the program better. In 2004 the Master of Science in Clinical Nutrition was set up in the Philippine Women’s University. It was designed to help develop the multidisciplinary approach to clinical nutrition. Here dietitians, nurses, physicians and pharmacists get advanced learning in hospital-based nutrition which was far different from community nutrition. They are trained to think like clinical nutrition specialists in dealing with nutrition management in their patients, thus adding to the growing ranks of nutrition team members. The addition of these graduates in clinical nutrition has contributed to the establishment of the clinical nutrition family or officially the Philippine Society of Parenteral and Enteral Nutrition or PhilSPEN family. This is shown in this 10th PhilSPEN congress picture in 2014. (Figure 18)

To encourage reporting of local experiences in clinical nutrition like the clinical nutrition fellowship training program, the PhilSPEN online journal of parenteral and enteral nutrition was set-up in 2007 and has been running for the past 10 years. This is the current web site address – http://www.philspenonlinejournal.com. We can now

This figure below (Figure 19) shows the summary of development of the clinical nutrition fellowship training and program. From education efforts to nutrition support team (NST) development using means like hospital modelling in practice and experience, workshop and attending/hosting conventions, the program was finally established in year 2000. The development of the master’s program followed in 2004. Then another milestone was reached in 2008 – it was the setting up of the Philippine Board of Clinical Nutrition or PBCN. The observation that in order to survive the program needed to be “credentialized” as a specialty training program and practice led to the creation of the PBCN. Now our graduates are officially stamped as specialists in clinical nutrition with board certification. Today we have 24 graduates with 20 certified fellows or “Diplomates of the Philippine Board of Clinical Nutrition”. Not bad for a rookie society in the field of medicine and surgery.

![Diagram](image.png)

Figure 19. The development of the clinical nutrition program in the Philippines through the Philippine Society of Parenteral and Enteral Nutrition

Our graduates are now distributed throughout the hospitals in the country. Before the establishment of PBCN these are the hospitals with an active nutrition program led by clinical nutrition specialists. Fast forward after 2008 and you see there is now an increase in the number of hospitals with NST’s in the country. This report in 2015 shows further progress in the setting up of NST’s and this occurred in both government and private hospitals, with the private hospitals leading the way. Overall there was a 34% presence of active and fully functional NST’s. (Figure 20) In this 2017 congress there will be reports on more progress of clinical nutrition teams and programs in the country.
So what are our graduates doing? In this survey done in 2012 it is seen that they are now heads of nutrition teams, hospital committees, wellness programs like weight management centers (75%). Some are involved in training and are faculty in medical schools (30%). 98% are in private practice, 89% are officers in different medical/surgical societies and 57% are involved in research. The same is seen in our master in clinical nutrition (MSCN) graduates. We are producing leaders and educators in the field of clinical nutrition. (Figure 21)
They are not alone. The contribution by the different institutions and industry are also apparent. In 2015 Abbott Nutrition Philippines did a survey on hospital nutrition practice and the following information came up. Hospitals labeled as having “basic clinical nutrition” program are doing nutrition screening and assessment on their admitted patients. (Figure 22, click to open) Hospitals in the “intermediate level” are performing monitoring of their patients’ intake and response especially in enteral and parenteral nutrition (Figure 23, click to open) while hospitals labeled as “advanced” have a full working clinical nutrition team with all clinical nutrition processes in place. (Figure 24, click to open) | (Click to access the article)

Another survey was done, this time with the involvement of PhilSPEN. Now an attempt to determine why patients get more malnourished while staying in the hospital was performed. It turned out that 70% of underweight patients were receiving only 40%-60% of their calculated intake. It was an issue of both nutrition screening and oral supplementation. If hospitals can immediately give oral supplementation to their underweight BMI and make sure they consume these, this will alleviate the problem, but it requires having a nutrition screening system in place. (Figure 25) | (Click to access the article)
Then this year (2017) a survey on hospital diet prescription was performed. It showed that the hospital standard diet prescription is still “full oral diet” – 97%. Enteral nutrition was 2% and parenteral nutrition less than 1%. This is evidence of the underutilization of enteral and parenteral nutrition in the hospital population. When another report on the practice on nutrition delivery by a clinical nutrition service was submitted to this PENSA 2017 congress it showed an increase in the delivery of enteral and parenteral nutrition by 24%-26%. (Click to access abstract) It means with a clinical nutrition specialist in place more patients will receive adequate nutrition. (Figure 26) This was shown in these local reports on good outcomes - in surgical patients (Figure 27, click to view) and in mechanically ventilated patients (Figure 28, click to view).

Hospital diet prescription profile - 2017

In everything that was presented to you, it will be noted that the development and growth of nutrition teams and programs in the country is gradual. (Click to view figure) If you look closely it coincided with the establishment of the clinical nutrition fellowship training program in 2000. The impact of the graduates’ work was not meteoric, it
was also gradual, but its effect on the overall interest in clinical nutrition was huge. From 2004 up to today attendance in the annual PhilSPEN congress is steadily growing. The past three years alone showed “full house”, limited only by the capacity of the convention venue and amount of food served.

In summary, these are the features of a successful hospital clinical nutrition program in the Philippines:

1. It is led by a graduate of the clinical nutrition fellowship training program
2. It implemented the clinical nutrition process
3. It is supported by the hospital administration and nutrition industry
4. Its personnel received “just” compensation
5. There is positive (+) return of investment (ROI)
6. They have active membership with PhilSPEN
7. They are prayerful

There are members of PhilSPEN and in the clinical nutrition world who are downright atheists, existential hedonists and pessimists. But the majority are prayerful specially when the odds are not in their favor. They succeeded. Why? The answer is in the words of the Lord Jesus Christ in the gospel of John 15:5 where He said “Abide in me and you will bear much fruit. Apart from me you can do nothing.” The other is in the Book of James 5:16 which states, “… The prayer of a righteous man is powerful and effective.” So we aim to continue living and practicing P and R – Prayerfulness and Righteousness - being assured of a brighter tomorrow in our work in clinical nutrition.

Thank you and good day.