

Enablers, Barriers and Experiences on Nutrition Care Process Implementation of Hospital Dietitians Employed on Selected Specialty Hospital in Metro Manila, Philippines

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Received date: April 22, 2022, Manuscript No. IPJCND-22-12557; **Editor assigned date:** April 25, 2022, PreQC No. IPJCND-22-12557 (PQ); **Reviewed date:** May 09, 2022, QC No. IPJCND-22-12557; **Revised date:** June 22, 2022, Manuscript No. IPJCND-22-12557 (R); **Published date:** July 01, 2022, DOI: 10.36648/2472-1921.8.7.22

Citation: Bernardino ME (2022) Enablers, Barriers and Experiences on Nutrition Care Process Implementation of Hospital Dietitians employed on selected Specialty Hospital in Metro Manila, Philippines. J Clin Nutr Diet. Vol:8 No:5

Abstract

In the field of dietetic practice, the Academy of Nutrition and Dietetics developed Nutrition Care Process Model (NCPM). The Nutrition Care Process (NCP) is a framework that is effective to provide improved nutrition care. The development and implementation of the NCP provided means for dietitian practitioners to become more autonomous within their profession. Many countries started to implement the NCP in their respective workplace setting including hospital setting. With regard to the implementation of the NCP in the international setting, only a few surveys and studies have been done. Since the NCP concept is quite new, very little has been conducted on implementation of the nutrition care process. In the Philippines, the Department of Health (DOH) released the Guidelines for the Implementation of Nutrition Care Process in Philippine Hospitals through the Administrative Order 2019-0033 last 2019. Since the Philippines launched NCP in hospital settings last 2019, it is important to assess the NCP implementation at the early stage.

Objective: The qualitative study aimed to explore the experiences of hospital dietitians as well as to identify the enablers and barriers on the implementation of Nutrition Care Process of selected specialty hospitals in Metro Manila, Philippines.

Method: The study used a cross sectional method with the use of survey questionnaire. A total of 52 Registered Nutritionist Dietitians (RND) from selected specialty hospitals in Metro Manila, Philippines, completed the survey questionnaire. The data being collected undergo a qualitative thematic analysis, condensing the text to meaning units and classifying them into different codes and categories/themes.

Results: The study identified different themes in every category such as implementation strategy and leadership, NCP documentation formats. The study abled to identify enablers in implementation such management support, peer support, proper education, allocated time to practice, professional integrity, regular training session, availability of electronic health record and required by the hospital and;

barriers such as lack of manpower, lack of support, lack of time, lack of sufficient data, lack of education and proper training, lack of financial resources, and the effect of pandemic.

Conclusion: In general, the implementation of NCP requires specialty hospitals their own adjustments in this new implementation process, since it was started last 2019. The results within the study are a good start/baseline for the Philippines to adopt the Nutrition Care Process in hospital nutrition and dietetic practice.

Keywords: Nutrition care process; Implementation process; Registered nutritionist dietitian; Hospital dietitian; Enablers and barriers; Experiences

Introduction

As a unique contribution of dietetics practitioners to the health care outcomes, the Academy of Nutrition and Dietetics (2003) adapted the Nutrition Care Process Model (NCPM) in facilitating critical thinking and decision-making in providing medical nutrition therapy in patient care [1,2]. The NCPM describes the Nutrition Care Process (NCP) by presenting the workflow of professionals in diverse individuals and population care delivery settings [3]. The NCP consists of four distinct but interrelated and connected steps: (a) Nutrition assessment, (b) Nutrition diagnosis, (c) Nutrition intervention, and (d) Nutrition monitoring and evaluation. The NCP model and associated terminology (NCPT) are also used to improve applications of evidence-based guidelines, critical thinking, and ensure more focused documentation of dietetic care [4]. This scientific process of nutrition care intends to provide diagnosis-oriented assessment and to treat nutrition problems with intervention plans [5].

Nutrition Care Process is a framework that is effective to provide improved nutrition care. Dietitians who use this framework are producing consistent and easy-to-read documentations of clinical practices that benefit other health-related members. In using this framework, dietitians increase

productivity by providing diagnosis-specific and focused documentation [5]. NCP helps to provide common nutrition diagnosis those results to positive impact of nutrition in patient care [6,7].

Moreover, on the study of Mujlli regarding on the impact of NCP documentation on obese children, they found out that there is an association between the quality of dietitian documentation in NCP and patient nutritional outcomes [8]. In addition to this, the literature supports the association between dietitian documentation in NCP and the improvement of patient outcomes in malnourished patients. This new process on nutrition care provides dietetics professionals with the best possible foundation for the highest quality patient centered care [2,9].

The development and implementation of the NCP provided means for dietitian practitioners to become more autonomous within their profession. Many countries started to implement the NCP in their respective workplace setting including hospital setting. With regard to the implementation of the NCP in the international setting, only a few surveys together with some minor implementation reports from different hospitals have addressed dietitians' perspectives regarding this fundamental process. Since the NCP concept is quite new, very little has been conducted on implementation of the nutrition care process, e.g., factors that support or hinder the process and the dietitians' experience [9,10].

In the Philippines, the implementation of Nutrition Care Process in the hospital setting is new. It was launched last 2019, when the Department of Health (DOH) released the Guidelines for the Implementation of Nutrition Care Process in Philippine Hospitals, through the Administrative Order 2019-0033. According to the scope and coverage, this order provides the mandate and direction for public and private hospitals to operationalize and institutionalize the Nutritional Care Process in their respective facilities. The AO-2019-0033 is a response to the Section 28 of the Republic Act 10862, also known as Nutrition and Dietetics (ND) Law. According to the scope of Practice of Nutrition and Dietetics, a Registered Nutritionist-Dietitian (RND) should offer a professional service such as providing Medical Nutrition Therapy (MNT) through the application of Nutrition Care Process for the purpose of disease prevention, treatment, and management.

To date, no earlier studies have been conducted regarding the NCP implementation particularly at specialty hospitals in Metro Manila, Philippines. In connection to this, the qualitative study aimed to explore the experiences of hospital dietitians as well as to identify the enablers and barriers on the implementation of Nutrition Care Process of selected specialty hospitals in Metro Manila, Philippines.

Materials and Methods

Research design and study population

The study used a cross sectional method with the use of survey questionnaire. Hospital Dietitian (Registered Nutritionist

Dietitian) working in selected specialty hospitals in Metro Manila Philippines were included in the study. Hospital Dietitian who is unable to complete the survey study and did not consent was excluded from the study.

Data collection

Online platform was the primary medium for data collection. The researcher used Google Mail to send an invitation to the chief/head of the department for the consent to conduct a study. The present study followed the Data Privacy Act of 2012 where all data collected were strictly used for research purposes and shall never be shared to a third party, not authorized by the researcher.

The present study used Google Forms to collect data from the subject. After the confirmation from the subject, the researcher would send an email with an attachment of the Google Form link.

Data gathering and data analysis

The present study explored the RND's experiences of selected specialty hospitals in Metro Manila on NCP implementation regarding strategies, leadership, NCP documentation formats, and enablers and barriers in the implementation using an open ended question modified from the study of Lovestam, Orrevall, Koochek and Andersson [4,10]. The data being collected in this qualitative study was analyze using thematic analysis in accordance to methods of Braun and Clarke. A qualitative thematic analysis was performed, condensing the text to meaning units and classifying them into different codes and categories/themes [11,12].

Ethical consideration

The present study was executed in accordance with the principles of Declaration of Helsinki and abides to the Data Privacy Act of 2012.

Results and Discussion

Demographics

A total of 52 Registered Nutritionist-Dietitians (RND) from selected specialty hospitals in Metro Manila, Philippines, completed the survey. Respondent characteristics are shown in Table 1. Most of the respondents are female with a total of 37 (71.2%). Most of the respondent's age was <30 years of age (69.2%). In terms of educational attainment, bachelor degree as the highest educational level and in terms of experience as RND most of respondents are 5 years with less than 10 years (30.8%).

Table 1: Characteristics of the Respondents.

Characteristics	N	%
Gender		
Male	15	28.8
Female	37	71.2
Total	52	100
Age		
<30 years	36	69.2
31-40 years	12	23.1
<41 years	4	7.7
Total	52	100
Educational level (Highest level)		
BS	44	84.6
MS	8	15.4
PhD	0	0
Total	52	100
Experience as Registered Nutritionist-Dietitian		
Less than 1 year	3	5.8
1 year	0	0
Less than 2 years	14	26.9
2 years but less than 5 years	12	23
5 years but less than 10 years	16	30.8
More than 10 years	7	13.5
Total	52	100

Qualitative analysis regarding Registered Nutritionist-Dietitian's experiences in NCP implementation

Implementation strategy and leadership: Nutrition care process implementation requires a multidisciplinary approach with the help of other health care workers. As stated in the AO-2019-033 health care workers specifically the physician, nurses, pharmacist, and social worker have their specific roles and responsibilities in implementing NCP. As we compare the result of the present study to other related study the implementation strategy specifically in Sweden hospital, at first dietitians attended national dietetic congress for NCP [11]. Same

with the Philippines, (NDAP) conducted a seminar series in NCP and also the Department of Health conducted training and seminar regarding NCP documentation (DOH, 2019).

“Nutrition Committee which consists of physicians, dietitians, nurses, pharmacists, medical social workers and Integrated Hospital Operations and Management Program (IHOMP) was formed on the last quarter of 2019”.

“We conducted a series of seminars for doctors, nurses, and other members of the healthcare team”.

“The nutritionally at risk patients are automatically referred for MNT and so NCP is used for proper management”.

“The doctor will refer the patient for nutrition care process, and then we will assess the patient, make the intervention and give it to the doctor”.

“We practice NCP by doing patient assessment and counseling as well providing special diets requested by the doctors. In addition, the doctors usually communicating with the dietitian regarding the changes and progress of the patient's diet”.

According to the study of Lovestam in large hospitals, the manager initiated implementation and one person has an

assigned facilitator role, leading a group of NCP champions. Not the same with small hospital were dietitians initiated implementation in dialogue with management (Table 2)[10,12].

Table 2: The implementation of Nutrition Care Process in the hospital is mandatory and as much as possible follow the AO 2019-0033.

“My chief dietitian instructed us to read the memo regarding the NCP AO by the DOH, some of our dietitian had a seminar with NDAP regarding NCP. Our department utilize the forms by the DOH and inform other HCW involve in the process”
“We are currently following DOH guidelines.”
“We follow the Guidelines for the implementation of NCP in hospitals AO 2019-0033”

NCP documentation formats: Based on the responses on this section, dietitians need to modify the form or add something on the form in order to fit in their needs for complete NCP documentation. While other dietitian still using other forms.

In the international setting, based on the literature most of problems of the dietitian in NCP documentation is the unfit features of their electronic health record. In large hospitals

several key words fit with the NCP or in some cases key words were restructured due to the NCP, which consumed a lot of resources while on small hospitals, key words not adapted to the NCP or in some cases key words were adapted to the NCP, which forced dietitians into NCP use (Tables 3 and 4) [10,13].

Table 3: The use of NCP forms attached in the AO with modification.

“Yes, we use the forms given by the Department of Health (attached in the AO-2019-0033) but also we include additional information that will fit to the condition of the patient”
“ Yes, we use the forms given by the Department of Health (attached in the AO-2019-0033) it but we modified some parts and tailored it with forms from various institution in the international practice”
“Nutrition Support Team formulated own forms adapted and based on the DOH NCP Guidelines”

Table 4: The use of other NCP forms.

We prefer to have our own modified forms that are easily to be implemented and explained in our patients.
“We use the forms given by PhilSpem”

Enabler and Barrier in NCP implementation: The present study identifies existing enablers and barrier in the implementation of the NCP [14-16]. Enablers in the implementation are reasons which increase the likelihood of efficacious implementation while barriers are the challenges in the implementation process. The result of the analysis of the present study was consistent with the other study (Tables 5-7) [17-22].

Table 5: The RND’s identified different factors that help them and their department in initiating or implementing NCP such as management support, peer support, proper education, allocated time to practice, professional integrity, regular training session, availability of electronic health record and required by the hospital.

Management Support	<p>“I think one of the factors that helped our department in implementing the NCP is the support of the management. The management allow the different company to sponsor training about comprehensive nutrition care plan and implementation”</p> <p>“Our head believes on the impact of nutrition in improving patient care. He is willing to support NCP”</p>
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Peer support	<p>“Cooperation is the most important key. Also, a well-planned endorsement on all HCP involved in the process is very important”</p> <p>“When other health allied professionals reach out or ask us about the proper administration of the intervention”</p>
Allocated time to practice	<p>“It's actually done beforehand; we just need to improve the practice that is required in the NCP. Good practice of NCP helps us to be much more in-depth in data collection and provision of nutritional care to patients.”</p>
Professional Integrity	<p>“Maintaining the good quality of nutrition programs for our patients”</p>
Regular training session and proper education	<p>“Factors that are helpful are constant training and sharing of knowledge.”</p>
Availability of electronic health record	<p>“The availability of patient information through the electronic medical records”</p>
Required by the hospital	<p>“The mandated AO of the DOH has greatly improved implementation of NCP in the hospital setting. Different ancillary units have already improved in terms of implementation”</p>

Table 6: The RND's identified different obstacles in initiating or implementing NCP such as lack of manpower, lack of support,

lack of time, lack of sufficient data, lack of education and proper training, lack of financial resources, and the effect of pandemic.

Lack of manpower	<p>“The lack of manpower of both the dietary department and the nursing staff. Because of the workload nurses aren't able to screen patients and provide essential anthropometric data. The dietary department is also lacking in manpower that's why primary role of clinical RND's may be hampered when there is need to supervise food service phase in the dietary department”</p>
Lack of support	<p>“Doctors and other allied health professionals who don't find NCP and MNT that important for the patient's recovery”</p> <p>“Honestly speaking, one of the struggles that we are experiencing is the lack of support/initiative on the Nursing side when accomplishing the Nutrition screening”</p>
Lack of time	<p>“Time management problems, lack of RND on duty, and high patient census”</p>
Lack of sufficient data	<p>“Lack of data in patient charts” “Sometimes, data are incomplete”</p>
Lack of education and proper training	<p>“NCP isn't widely and intensively taught in schools, I, too, personally struggle with NCP documentation”</p> <p>“Lack of training and others refuse because they find it as extra work”</p>
Lack of financial resources	<p>“Budget will always be hindrance towards procurement on tools and facilities to be used in NCP. It only takes time and audit for procurement of those things I mentioned”</p>
Effect of Covid-19	<p>“Pandemic hinders coordination with other allied health care professional”</p> <p>“This pandemic hit us very hard because we cannot go to them and see what's the reality happening to the px.”</p>

Table 7: Summary of enablers and barriers in the NCP/NCPT implementation from related studies.

Author	Enablers/Facilitator	Barrier/Obstacles
Lovestam et al. 2020	Recommendation by the national dietetic	Lack of time*
	Peer support*	Lack of training and education*
	Electronic health records*	Lack of knowledge*
Alkhaldy et al. 2020		Lack of manpower (not enough dietitian)*
		Conflict with the hospital nutrition care system
		Not enough experience
O'Sullivan et al. 2018	Educational enablers	Lack of training and support*
	Management support*	Lack of time*
		Lack of knowledge
Vivanti et al. 2017	Educational enablers	Lack of knowledge
	Such as webinars and Presentation	Lack of time*
	Management Support*	Lack of resources*
	E-health record*	
Vivanti et al. 2015	Value of tutorials and practice, mentor support*	Lack of time*
	Resources such as pocket guides.	Lack of knowledge
		Lack of resources*
Porter et al. 2015	Allocated time to practice and regular tutorials	Lack of knowledge, support, training and resources*
	Support and leadership from their management and NCP department leader	Busy workloads and work status
	Professional growth*	
Desroches et al. 2014	Training opportunities	Lack of knowledge
	Widespread implementation in the hospital	Not applicable in all dietetics context
	Time allowance	Time constraint
Kim and Baek 2012	Benefits of NCP (easy decision making, standardization of performance, and save time to spent)	Lack of dietitians' knowledge
		Lack of sympathy on dietitians
		Increased time to spent due to system change
Legend: *=Same with the result of the present study		

Conclusion

In general, the implementation of NCP requires specialty hospitals their own adjustments in this new implementation process, since it was started last 2019. The results within the study are a good start/baseline for the Philippines to adopt the Nutrition Care Process in hospital nutrition and dietetic practice.

The qualitative analysis regarding Registered Nutritionist-Dietitian's experiences in NCP implementation, the implementation and strategy, and enablers and barriers on NCP implementation were consistent with the literature. Since the study explored the experiences of the hospital dietitians and identified the enablers and barriers, the government, national organization and hospital management should address the gaps in implementing the Nutrition Care Process in the Philippine hospitals.

The national organization and hospital management should encourage and strengthen the use or practice of NCP especially in hospital/clinical nutrition; they should provide support in terms of providing talks, symposiums or focus group discussions regarding NCP implementation. As well as providing in-house training and education, inclusion of NCP documentation as essential part of patient's medical chart/record and even providing seminars, talks, symposium and focus group discussion with other health care workers regarding their role in NCP implementation. Also the department/peers should recognize NCP documentation/implementation as one of the essential/major role of RND's in hospital/dietetic practice.

Delimitation of the study

The present study attempted to include other public tertiary hospital in Metro Manila. There are some hospitals that were excluded since they are not currently implementing the process. Others did not respond on the email that the researcher sent.

In order to increase the number of the respondents, the research decided to include 10 RND's who are mainly in-charge in Food Service/Production area but have a clinical rotation/experience with the NCP documentation within the implementation period.

References

- Hammond M, Myers E, Trostle N (2014) Nutrition Care Process and Model: An Academic and Practice Odyssey. *J Acad Nutr Diet* 114:1879-1894
- Lacey K, Pritchett E (2003) Nutrition care process and model: ADA adopts road map to quality care and outcomes management. *J Acad Nutr Diet* 103:1061-1072
- Thompson KL, Davidson P, Swan W I, Hand R K, Rising C, et al. (2015) Nutrition Care Process Chains: The "Missing Link" between Research and Evidence-Based Practice. *J Acad Nutr Diet* 115:1491-1498.
- Swan WI, Vivanti A, Hakel-Smith NA, Hotso B, Orreval Y, et al. (2017) Nutrition Care Process and Model Update: Toward Realizing People-Centered Care and Outcomes Management. *J Acad Nutr Diet* 117:2003-2014
- Ichimasa A (2015) Review of the Effectiveness of the Nutrition Care Process. *J Nutr Sci Vitaminol* 61:S41-S43
- Shiner R, Galvin A, Robert S (2010) The Nutrition Care Process in Acute Care: Identifying Common Nutrition Diagnosis and Resolution Rate. *J Am Diet Assoc* 9:110-185
- Copes L, Ramsey K (2010) Using the Standardized Language for the Nutrition Care Process in the Electronic Health Record to Measure and Report Nutrition Care Outcome. *J Am Diet Assoc* 110:A86
- Mujlli G, Aldisi D, Aljuraiban G, Abulmeaty S (2021) Impact of Nutrition Care Process Documentation in Obese Children and Adolescents with Metabolic Syndrome and/or Non-Alcoholic Fatty Liver Disease. *Healthcare (Basel)* 9:188
- Gourley JL (2007) Assessing Perceptions Toward Implementation of the Nutrition Care Process among Registered Dietitians in Northeast Tennessee." *Jessica Lee Paper* 20-85
- Lovestam E, Boström AM, Orreval Y (2017) Nutrition Care Process Implementation: Experiences in Various Dietetics Environments in Sweden. *J Acad Nutr Diet* 117:1738-1748
- Alkhalidy, Areej A, Allahyani, Manal N, Alghamdi, et al. (2020) Status of nutrition care process implementation in hospitals in Jeddah, Saudi Arabia. Elsevier, Saudi Arabia.
- Clarke V, Charney P (2006) Using thematic analysis in psychology. *Qual Res Psychol* 3:77-101
- Department of Health-Philippines (2012) Administrative Order No. 2012-0012 Rules and Regulation Governing the New Classification of Hospitals and Other Health Facilities in the Philippines. Department of Health.
- Desroches S, Lapointe A, Galibois I, Deschenes SM, Gagnon MP, et al. (2014) Psychosocial factors and intention to use the nutrition care process among dietitians and dietetic interns. *Can J Diet Pract Res* 75: 336-41
- Institute of Medicine (2001) Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academy Press Washington, DC.
- Kim EM, Baek HJ (2013) A Survey on the Status of Nutrition Care Process Implementation in Korean Hospitals. *Clin Nutr Res* 2:143.
- Lövestam E, Vivanti A, Steiber A, Boström AM, Devine A, et al. (2020) Barriers and enablers in the implementation of a standardised process for nutrition care: findings from a multinational survey of dietetic professionals in 10 countries. *J Hum Nutr Diet* 33:252-262
- O'Sullivan, Vivanti A (2018) Predictors of nutrition care process and terminology use, applicability and importance within Asia-Pacific dietitians. *Nutr Diet* 76:455-46
- Philippine Regulation Commission (2017) Republic Act 10862 establishing Nutrition and Dietetics Law. Department of Legislation.
- Porter JM, Devine A, Vivanti A, Ferguson M, O'Sullivan TA (2015) Development of a Nutrition Care Process implementation package for hospital dietetic departments. *Nutr Diet*, 72:205-212.
- Vivanti A, Ferguson M, Porter J, O'Sullivan TA, Hulcombe J (2015) Increased familiarity, knowledge and confidence with Nutrition Care Process Terminology following implementation across a statewide health-care system. *Nutr Diet* 72:222-231
- Vivanti A, Lewis J, O'Sullivan TA (2017) The Nutrition Care Process Terminology: Changes in perceptions, attitudes, knowledge and implementation amongst Australian dietitians after three years. *Nutr Diet* 75:87-97