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Evaluation of the "Basic Training Course for Physicians on the Assessment and Management of Drug Dependence", 2013-2017

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This paper was conceptualized to document and evaluate the development and conduct of the training course for physicians on the assessment and management of drug dependence from 2013 to 2017, and provide a model by which other institutions or groups may approach capacity development for drug dependence rehabilitation. Using a case study approach, training-related documents and records for all training activities conducted between 2013 and 2017 were retrieved and reviewed. An iterative process of data abstraction was conducted to describe the a) training process, including the course design, structure and content; and b) the training outputs in terms of coverage (i.e., participants trained) and the first two levels of Kirkpatrick's training evaluation framework (i.e., reaction, and learning). The basic training course implemented in the Philippines is a twoweek locally-developed program consisting of five modules that covers the theoretical and practical aspects of the assessment and management of drug dependence. A total of 208 physicians from across the country were trained and accredited between 2013 and 2017. Paired-samples t-test on the examination scores of 136 participants showed that there was a significant difference in the pre-test (29.71±3.95) and post-test scores (40.31±4.90); t(135)=22.4797, p = < 0.0001.

Keywords: education [Subheading]; program evaluation; physicians; diagnosis [Subheading]; disease management; substance-related disorders; addiction medicine; Philippines

Introduction

Drug addiction and dependence is identified as being among the pressing health and social problems in the Philippines today. There are approximately 1.8 million Filipinos aged 10-69 years who are current drug users (DDB and REECS, 2016), of whom around 5,400 are committed in various government-owned and private drug rehabilitation centers (DDB, 2016).

The complexity of the condition, characterized by an uncontrollable craving and seeking for drugs and which can result to other mental, physical, and even social consequences, requires the delivery of a combination of medication and behavioral therapy tailor-fitted for each

individual patient (i.e., considering the type of drug used, the duration and severity of addiction, the presence of other disease conditions, the venue or setting in which care is being provided, and the social-demographic characteristics of the drug user) (McLellan, 2017; NIDA, 2012; Perry et al., 2014; Perry, Neilson, et al., 2015a, 2015b; Perry, Neilson, Martyn-St James, Glanville, Woodhouse, & Hewitt, 2015). Physicians should be at the frontline of treatment (Rapoport and Rowley, 2017).

In the Philippines, Republic Act No. 9165, or the Comprehensive Dangerous Drugs Act of 2002, placed upon the Department of Health (DOH) the responsibility of developing policies, guidelines, and accreditation standards on treatment and rehabilitation (Congress of the Philippines, 2002). Moreover, the DOH is tasked to train and expand the pool of competent accredited physicians who shall conduct the drug dependency evaluation of patients and rehabilitation practitioners who shall carry out the appropriate treatment plan for each drug dependent. However, the lack of standardized training in the early 2000s among DOH-accredited physicians and rehabilitation workers (Antonio et al., 2018), coupled with the minor focus paid to addiction science in the local medical curriculum (Enriquez, 2005) and the very few exemplar programs that could be adopted to meet local needs, (e.g. Colombo Plan Drug Advisory Program), has hindered the implementation of this mandate.

To address this challenge, the Dangerous Drugs Abuse Prevention and Treatment Program of the DOH (DDAPTP-DOH), in partnership with the College of Public Health of the University of the Philippines Manila (CPH-UPM), and two professional organizations – the Group for Addiction Psychiatry of the Philippines (GAPP), and Philippine College of Addiction Medicine (PCAM) – developed a customized and standardized training program that aims to contribute to the management of drug dependence in the Philippines. This collaboration was formed to pool the expertise of each group and fill the foreseen gaps of the program if it was implemented by the DOH-DDAPTP alone (Antonio, et al., 2018). Through this program, physicians and rehabilitation workers of both the public and private sectors from all over the

country are taught and trained on how to properly diagnose and manage drug-dependent patients, after which they are granted DOH accreditation.

Since its inception in 2009, the training course has been offered continuously to eligible participants, but not formally reviewed. This paper was, thus, conceptualized to document and evaluate the experience of the author team in developing and conducting the training courses for physicians on the assessment and management of drug dependence from 2013 to 2017, and provide a model by which other institutions or groups may approach capacity development for drug dependence rehabilitation, in particular, and training program development for health professionals, in general.

Methods

Using a case study approach, the author team reviewed training-related documents and records for all training activities for physicians conducted between 2013 and 2017 located in the archives of the College of Public Health, University of the Philippines Manila. These included training manuals, handouts, presentations materials, progress reports, pre- and post-test examination data, post-training reports, participant feedback forms, and minutes of training team meetings. Data obtained from these documents included the training objectives and modules, training program activities, demographic profile of participants, their pre- and post-test scores, and training evaluation results.

An iterative process of data abstraction was conducted to describe the a) training process, including the course design, structure and content; and b) the training outputs in terms of coverage (i.e., participants trained) and the first two levels of Kirkpatrick's training evaluation framework (i.e., reaction, and learning) (Kirkpatrick and Kirkpatrick, 2016). Reaction was based on the participants' written course feedback collected immediately after each course using a form developed by the training organizers. Learning, or change in knowledge, on the other hand, was based on the mean difference in the test scores of participants who answered a 55-

item questionnaire before and immediately after the training. Test data was analysed using paired-samples t-test using a 95% confidence level.

Senior members of the writing team, who were also part of the training team, validated the findings based on their collective recollection of the events related to the training program.

Results

Training design and process

The DOH-DDAPTP, along with selected experts, spearheaded the development of the training manual on drug dependence. In 2009, four pilot trainings for physicians were conducted by the CPH-UPM in accordance with the guidelines and activities stated in the training manual. The results of the pilot trainings were used as basis for enhancing the modules that comprised the final version of the training manual. Among the revisions done were: (1) refining activities and workshops to maximize time allotment for each topic, (2) rationalizing the sequence of the topics, and (3) coming up with a pool of resource speakers for each topic.

The objectives, content, and teaching-learning strategies of the different modules comprising the training course is briefly described below (see appendix for summary).

Module 1 introduces the basic concepts of drug dependence. Activities related to this module include case identification to assess how well the participants know commonly used terms related to drug dependence, and preparation of a schematic diagram showing the causes and processes of drug dependence, among others. Commonly abused substances are discussed from a medical and pharmacological perspective. A handout on the history and epidemiology of drug use in the Philippines is also provided for self-study by the participants.

Module 2 tackles the laws and policies related to drug use. The main topic of this module is the Republic Act No. 9165 (the Comprehensive Dangerous Drugs Act of 2002). Provisions of

the law were discussed thoroughly, and case examples were given in order for the participants to learn how to handle cases being brought to treatment and rehabilitation centers. The difference between the two modes of rehabilitation – voluntary submission and compulsory commitment – were given emphasis in the module. Lectures and case studies regarding policies on documentation and its handling, court reporting, and testifying in court proceedings are also given. To broaden the understanding of the topic, a mock court trial is held with resource persons actively involved in drug dependence cases (i.e., representative from the Office of the City Prosecutor of the City of Manila; Dangerous Drugs Board legal consultant; and a lawyer from the Public Attorney's Office). The resource persons stressed the important role of the physicians as expert witnesses during a drug dependency trial.

Module 3 highlights the assessment and diagnosis of patients suspected of substance use and abuse. It is divided into three units: (1) Initial Assessment, (2) Examinations and ancillary procedures, and (3) Diagnosis. Unit 1 deals with the screening and interview of patients. Drug Dependency Examination (DDE) with History Writing and Mental Status Examination (MSE) are introduced as well. Unit 2 tackles different physical and neurological tests, and ancillary procedures (i.e., laboratory, radiological, and psychological testing) for patients. Meanwhile, Unit 3 is focused on the diagnosis of substance-related disorders as well as their co-occurring disorders. These topics are mainly taught through lectures, role plays, and case analysis. At the end of the module, the participants present and submit their DDE report of the case presented in the role play. This module can be considered as a core component of the course since the preparation of a DDE is one of the main functions expected of trained physicians when they return to the workplace.

Module 4 focuses on the management and treatment of diagnosed patients. This is subdivided into two units. Unit 1 introduces important concepts concerning treatment planning. Among these are the Stages of Change model and the Addiction Severity Index (ASI), a semi-structured interview template, that aids in identifying patient needs. These tools can serve as

basis for crafting the suitable treatment approach for the patient. This is followed by preparation of a treatment plan and coordinating interventions for patients. On the other hand, Unit 2 deals with counselling approaches and handling special situations such as relapses and crises.

Aftercare and follow-up program stipulated in Republic Act No. 9165 is also discussed.

Lectures, plenary discussions, open forums, and role plays are used to explore these topics.

Module 5 is the practicum part where the participants undergo supervised exposure and actual case loading at the Central Screening and Referral Unit (CSRU) of a public hospital and at a public treatment and rehabilitation center. The training participants are divided into groups of five to six members, each with an assigned patient whom they must screen and assess under guidance by a preceptor who is usually the medical staff of the rehabilitation center where the practicum is being held. Training participants are then mentored on how to prepare their case report and develop the treatment plan for their assigned case. These are then presented for critique to a panel composed of four core trainers. Field visits to a public psychiatric facility and a private treatment and rehabilitation center are also done.

The course spanned two weeks to cover all the modules (Table 1). On the first day, participants were oriented on the contents of the training program and asked to answer a pretest. The rest of the first week was allotted for the didactics part (Modules 1 to 4). Resource speakers delivered lectures and presided over other learning activities outlined in the manual for the next five days. The second week was allotted for the practicum part (Module 5).

Training participation is open to all physicians working with drug dependents and who are nominated by their institutions, subject to screening by the DOH-DDAPTP. Each training session is limited to a maximum of 30 participants to maintain the quality of learning, given the course structure and content as discussed above.

Training results

There were eight training courses conducted from 2013 to 2017 (no training courses were offered between 2010 and 2012, during which time the modules were enhanced and revised based on the learnings from the pilot implementation in 2009).

A total of 208 physicians were trained across the eight sessions, which translates to an average of 26 trainees per session (Table 2). Male and female participants were equally represented, which was a logistical artefact (i.e., accommodation arrangements provided by the organizers) more than a strategy of achieving gender balance.

Training attendees represented all of the Philippines' 17 administrative regions, a deliberate strategy of the DDAPTP-DOH to ensure that there was at least one trained physician per region. The most number of participants came from Region IX/Zamboanga Peninsula (n = 39), Region XIII/Caraga (29), National Capital Region (21), Region I/Ilocos (13), and Region III/Central Luzon (13). Cumulatively, these five areas accounted for more than half of the total participants trained in the course. Three regions had less than five trained physicians: Region X/Northern Mindanao (n = 4), Cordillera Administrative Region (4), and Autonomous Region of Muslim Mindanao (1).

Around half of participants were assigned in provincial, city or municipal health departments (n = 107), while about a fifth (43) were working in public hospitals. Physicians employed as health officers in local government are the frontline service providers – in some cases, the sole healthcare provider – in most communities in the Philippines; hence, they were specifically recruited by the DDAPTP-DOH as a deliberate strategy to widen the reach of accredited providers (Dayrit, Lagrada, Picazo, Pons, & Villaverde, 2018).

In terms of reaction, majority of the participants "strongly agree" and some "agree" that the training objectives and topics covered are relevant to the course and to their work setting.

They also deemed these as specific, reasonable, and attained during the training. The teaching-

learning activities were considered consistent with the objectives, especially the use of the practicum as a culminating activity as this allowed the participants "to translate theory into practice" (actual feedback from one training participant).

A paired-samples t-test was conducted to compare test scores before and immediately after the training activity for 136 participants (65.38% of all participants) for whom examination results were available to measure short-term learning gains. There was a significant difference in the pre-test (29.71 \pm 3.95) and post-test scores (40.31 \pm 4.90); t(135)=22.4797, p = <0.0001.

Discussion

The basic training for physicians implemented in the Philippines is a two-week locally-developed course consisting of five modules that covers the theoretical and practical aspects of the assessment and management of drug dependence. The program was able to train physicians serving in different healthcare institutions throughout the country. There is indication that there is a statistically significant change in participant knowledge after completing the course, which was complemented by participant perception that the training objectives were attained at the end of the program.

The training course described in this paper was conceptualized primarily based on local needs and available resources around a decade ago, since there were very few models of physician training on drug rehabilitation and addiction medicine that are published in the literature at that time. It is worthwhile to note, however, that the content of the Philippine course was comparable to the curriculum adopted by most countries, which covered the domains of screening, assessment, diagnosis, and management (A. P. Ayu, Schellekens, Iskandar, Pinxten, & De Jong, 2015). An advantage of the Philippine training program is its incorporation of the pertinent laws and statutes governing drug rehabilitation in the local setting.

The two-week training duration – an effect of resource constraints, as well concerns with minimizing disruption of service provision in the participants' institutions – is relatively short, as other programs that were deemed effective in increasing physicians' knowledge and confidence in treating patients spanned four weeks (Brown, Kolade, Staton, & Patel, 2013), six months (Strang, Hunt, Gerada, & Marsden, 2007), and even one year (Srivastava, Kahan, & Jiwa, 2012). Nonetheless, it was suggested by A. P. Ayu, et al. (2015) that even short training programs are effective in improving knowledge, skills, and attitudes of physicians in addiction medicine, and the comparison of pre- and post-test scores of participants in the Philippine training seem to support this notion. Handling of an actual clinical case and the use of an objective structured examination at the end of the course may have facilitated learning, as both have been documented to be effective teaching methods (Parish, Ramaswamy, Stein, Kachur, & Arnsten, 2006; Polydorou, Gunderson, & Levin, 2008).

The Philippine training program, however, should be seen in its proper context – a short-term solution capacitating physicians of different specialties so that they can render services to Filipino drug dependents in their respective localities within the confines of prevailing regulations. Moving forward, there may be a need to consider formally establishing a local fellowship program in addiction medicine (within the internal medicine, psychiatry, or general practice training programs) modelled after those in the United States, Canada, the Netherlands, Australia, and Malaysia, among others (A. P. Ayu, et al., 2015; Crockford et al., 2015; Norsiah, Whelan, & Piterman, 2008; Wood, Samet, & Volkow, 2013). It may also be worthwhile to consider the incorporating addiction medicine training in the medical curriculum (pre-service), and as part of continuing professional education (Astri Parawita Ayu et al., 2017).

Readers are cautioned to interpret findings in this paper in light of a couple of limitations in the design of the review and rapid evaluation. This paper relies on a retrospective review of a training program conducted over a six-year period. While data collection and analysis were

accomplished over a short time frame, the robustness of the analysis and conclusion was constrained by the availability of archived documents and files related to the training course. For example, only about two-thirds of participants had examination data on file; this was, nonetheless, sufficient to attain a power of at least 80% for the paired-sample t-test, which required a minimum sample size of six. In addition to the development of a more deliberate records management plan, a prospective evaluation design may be able to capture more granular data that can contribute to a richer analysis of the training process and results. Second, assessment of the training outcomes was limited to the first two levels of Kirkpatrick's framework, which are focused on learning within and immediately after the course. Application of knowledge and skills in the workplace months or years after the training would be a better gauge of training impact, something which can be considered by the DDAPTP-DOH in the development of its internal research agenda.

Conclusions

The basic training for physicians is a locally-developed program that appears to be comparable in terms of content and output with programs of longer duration implemented elsewhere. By way of this course, more than 200 physicians working across the Philippines have been accredited on the assessment and management of drug dependence and can contribute to addressing the burden of the condition in their respective jurisdictions. The Philippine training program can be used as a model by other countries or institutions contemplating to establish a course on drug dependence rehabilitation.

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The evaluation team was assisted by Ms. Kristine Joy L. Tomanan and Mr. Patrik James D. Cabrera.

Author disclosure

Most authors (with the exception of CHT) are part of the organizing team and/or training team for the Basic Training Course for Physicians on the Assessment and Management of Drug Dependence, which is the subject of this paper.

CTA conceptualized the project. CTA, JPG, ECC and LLC designed the evaluation plan. CHT prepared the first draft and with CTA finalized the manuscript based on comments from other authors. CTA revised the manuscript based on reviewer feedback. All other authors provided data, reviewed results, and/or contributed to the report. All authors approved the final version submitted.

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Table 1. General training layout

	Topics				
	Pre-test Pre-test				
Day 1	Module 1: Understanding Drug Dependence				
	Module 2: Substance Abuse and Jurisprudence				
Day 2	Module 3: Assessment and Diagnosis				
Day 3	I would 3. Assessment and Diagnosis				
Day 4	Module 4: Management of Drug Abuse and Dependence				
Day 5					
Day 6		Public treatment and rehabilitation center			
	Module 5: Practicum	Orientation			
Day 7		Supervised Exposure and Actual Case			
		Loading			
		DDE Writing			
Day 8		Field Visits:			
		Public psychiatric facility			
		Private treatment and rehabilitation center			
Day 9		Report writing			
		Mentoring			
Day 10		Panel Presentation			
		Post-test			
		Course Evaluation			

Table 2. Characteristics of training participants (N = 208)

Characteristic	No.	%
Sex		
Male	104	50.00%
Female	104	50.00%
Place of work (region)		
National Capital Region	21	10.10%
Cordillera Administrative Region	4	1.92%
Region I (Ilocos)	15	7.21%
Region II (Cagayan Valley)	6	2.88%
Region III (Central Luzon)	15	7.21%
Region IV-A (Calabarzon)	11	5.29%
Region IV-B (Mimaropa)	10	4.81%
Region V (Bicol)	10	4.81%
Region VI (Western Visayas)	6	2.88%
Region VII (Central Visayas)	11	5.29%
Region VIII (Eastern Visayas)	6	2.88%
Region IX (Zamboanga Peninsula)	39	18.75%
Region X (Northern Mindanao)	4	1.92%
Region XI (Davao)	8	3.85%
Region XII ((SOCCSKSARGEN)	12	5.77%
Region XIII (Caraga)	29	13.94%
Autonomous Region in Muslim Mindanao	1	0.48%
Institutional affiliation		
Treatment and Rehabilitation Center	34	16.35%
Hospital	43	20.67%
Local Health Office	107	51.44%
Centers for Health Development	18	8.65%
Others	6	2.88%

Appendix: Training objectives and module topics for the basic training course for physicians

Module	Objectives	Topics		
1: Understanding	Appreciate the magnitude of	History and epidemiology of		
Drug Dependence	drug problem in the Philippines	drug use in the Philippines		
	Use appropriately common	Causes and process of		
	terms in drug dependence	dependence		
	rehabilitation work	Commonly used terms		
	Achieve a good understanding	Pharmacodynamics of		
	of how drug dependence	commonly abused		
	develops	substances		
	Have a good working knowledge			
	of commonly abused drugs			
	Understand that rehabilitation			
	work is guided by laws and			
	statutes of the Republic of the			
	Philippines			
2: Substance Abuse	Understand the pertinent laws	Laws related to substance		
and Jurisprudence	regarding drug rehabilitation	abuse treatment		
	work	Policies on documentation		
	Demonstrate the proper	and document handling in		
	documentation and handling of	treatment rehabilitation		
	patient records	centers (TRCs)		
	Demonstrate the proper attitude	Ethics in drug abuse		
	and competency as an expert	treatment, including basic		
	witness in court	human rights		
3: Assessment and	Conduct proper screening and	Introduction to Drug		
Diagnosis	intake interview	Dependency Examination		
	Develop interviewing skills for	(DDE) with history writing		
	history taking	Mental status examination		
	Perform and master Drug	(MSE)		
	Dependency Evaluation (DDE)	Physical and neurological		
	Familiarize with the different	examination		
	ancillary examinations			

		Laboratory and radiological	
		examination	
		Psychological testing	
		Diagnosis	
		Co-occurring disorders	
4: Management of	Prepare a treatment plan for a	Treatment planning	
Drug Abuse and	specific patient based on result	o Stages of change	
Dependence	of needs analysis and	o Addiction Severity Index	
	prioritization	o Treatment modalities:	
	Utilize counseling skills when	Principles, types,	
	working with patients or their	approaches	
	relatives	 Brief interventions 	
	Design an aftercare program	 Prioritizing treatment 	
	that will suit the need of patients	needs	
	Coordinate with other	Coordinating treatment	
	stakeholders about the treatment	Counseling: Individual,	
	plan for the patients	group, family	
	Apply principles of ethics and	Relapse preventionCrisis management	
	human rights in drug		
	rehabilitation work	Aftercare and follow-up	
	Manage patients and their	program	
	environment in a crisis situation		
5: Practicum	Perform actual assessment	Screening and assessment	
	procedures and make a	Drug Dependency	
	treatment plan on assigned	Examination (DDE)	
patients in a drug rehabilitation		Treatment Planning	
	facility	Case Presentation	
Present the case to panel			
	members who were pre-selected		
	by the organizing committee		