

# Diabetes mellitus philippine callcentre staff health and social care essay

[Health & Medicine](#), [Diabetes](#)



The outsourcing industry is presently a turning tendency in the Philippines supplying employment chances for many immature professionals. The Filipino outsourcing industry has grown 46 % yearly since 2004 ( Rivette, 2010 ) and is presently stand foring 21 % of the \$ 7. 2 billion of entire Business Process Outsourcing ( BPO ) gross worldwide. With the addition in BPO employment chances, more and more immature Filipino professionals are using for and working as call centre agents. Approximately 400, 000 Filipinos are already employed as call centre agents ( Rivette, 2010 ) and with a growing rate of 46 % yearly, it can be estimated that another 200, 000 Filipinos will be fall ining this work force following twelvemonth. However, despite the economic benefits of the enlargement of BPO in the Philippines, an addition in work-related diseases in call centre companies have besides been reported. The most researched work-related disease in call centres in the Philippines is on sexually transmitted infections, peculiarly HIV-AIDS. Harmonizing to the survey done by the UP Population Institute ( 2010 ) , 20 % of male call centre agents are commercial sex workers while 14 % of them give payment in exchange for sex. The survey besides showed that 1/3 of call centre agents have had insouciant sex in the last 12 months. These statistics validate the addition in hazardous sexual behaviour among call centre agents in the Philippines. However, addition in hazardous sexual behaviour is merely a portion of the life style of most call centre agents. Other hapless lifestyle picks observed among call centre agents is their backing of fast nutrient, smoke, ingestion of intoxicant, increased caffeine consumption, reduced slumber, and diminish physical inaction. Besides hapless lifestyle picks, the nature of their work besides predisposes them to

emphasize and perturbations in their sleeping form. All of these factors predispose them to wellness jobs peculiarly high blood pressure, fleshiness, and diabetes. A figure of surveies have already been conducted on the incidence of sexually transmitted diseases and name centre agents in the Philippines but there are presently no surveies yet on the incidence of other diseases among call centre agents. This survey would wish to bridge this information spread because cognition on the development of other diseases like high blood pressure and diabetes are besides every bit of import as cognition on the increased transmittal of STIs among call centre agents. A

In this survey, the research workers would wish to research the association between the development of Diabetes Mellitus Type II among call centre agents in the Philippines. As mentioned above, name centre agents and their lifestyle predisposes them to developing diabetes. The research workers would wish to turn to the job of potentially developing Diabetes Mellitus because of the long-run complications of this disease on the quality of life. The research workers would desire to specifically turn to Type II Diabetes Mellitus for the basic ground that this type of Diabetes develops chiefly because of lifestyle factors. The research workers believe that cognition on the association between call centre agents and the development of Diabetes Mellitus Type II is extremely important because of the wellness deductions of this disease and its possible to be prevented.

### **Significance of the Study**

The increasing tendency of call centre bureaus in the state provides occupation chances to the increasing supply of alumnus in the state. Bing

employed as a call centre agent in a call centre bureau is assumed to increase the hazard of sensitivity to different disease entities because of the extremist life style alterations one undergoes. With the increasing figure of employed call centre agents, there is hence an addition in the figure of people who are at hazard of getting diseases.

Few literature trades with call centre agents that discusses the acquisition of certain diseases secondary to their business. This survey aims to increase the fund of literature with respect to this.

Diabetes Mellitus, Type II is a chronic and debilitating disease. Besides, as said, this is a life-long disease. Once a individual acquires this disease, he or she will everlastingly be predisposed to the co-morbidities and effects of the disease ; which in bend, will diminish one 's figure of productive life old ages. A Prevention is the most cost-effective attack when aiming populations. If the consequences of this survey will demo an association between being a call centre and getting Diabetes Type II, we would be able to turn to the spread in cognition with respects to the association of being an employed call centre agent and getting Diabetes Mellitus, Type II. Besides this would supply extra informations for policy shapers to turn to steps with respects to the bar of this disease.

### **Scope of Restrictions**

The survey will merely include employees in call centres in Ortigas, Philippines. The survey will be done for a period of 5 old ages and will merely find if an person will develop Type II Diabetes Mellitus ( DM ) or non. The

survey will non quantify the grade and badness of the disease upon diagnosing. Fasting blood glucose ( FBG ) will be used in the diagnosing of DM, as it is the most dependable and convenient trial for placing DM in symptomless persons ( Fauci et al, 2008 ) and portion of the guidelines used by the American Association of Clinical Endocrinologists ( AACE Diabetes Mellitus Clinical Practice Guidelines Task Force, 2007 ) . Persons will be counted as instances if diagnosed with Type II DM through the class of the survey. Cases will be provided with appropriate intercessions ( non-pharmacological, referral ) .

The survey will except those who have the followers at the start of the survey: Type II DM, history of Diabetes in the immediate household, organic structure mass index ( BMI ) above or below the normal value as per Asian criterion, and more than or equal to 30 old ages of age. These exclusion standards are the factors that can be controlled in choosing the persons within the population that may predispose them to be identified as instances.

## **Name Center Industry**

Harmonizing to a reappraisal done by O'Maley ( 2008 ) , the Philippines has been a major participant in the outsourcing industry over the past 10 old ages. Six major factors were identified to be the grounds why the Philippines take part radically in the said industry. One is the increasing authorities support for information engineering investing despite the fickle political clime. Second is the uninterrupted pooling of college alumnuss with good English communicating accomplishments and proficiency. It was stated in the reappraisal that 75 % of the entire population in the Philippines

( harmonizing to a United Nations ' informations ) speak English fluently with a 94 % literacy rate which gives a comparative advantage in the industry as compared to other states. Third is high cognition about Information and CommunicationsTechnology( ICT ) . Fourth is the easy constitution of a dependable and moderately priced telecommunication substructure. Fifth are the low costs but high quality locations of call centre bureaus. And in conclusion, 6th, the increasing tendencies of outsourcing globally.

In that same article written by O'Maley, it was said that the Philippines systematically ranks among the top five Business Procedure Outsourcing ( BPO ) locations globally. This portions a five-year-compounded one-year growing rate of 38 % . The Philippine BPO system was besides coined as the major participant in the growing of the service sector in the state.

The Philippines plays a major function in providing the demand for more call centre agents as an consequence of the planetary trending of outsourcing worldwide. Harmonizing to the Philippine National Statistic Office ( 2010 ) , name centre activities ranked first among all BPO activities covering about half of the entire industry with 219 ( 48 % ) call centre constitutions.

With the increasing figure of call centre bureaus, it is logical to state that there is besides an increasing demand for call centre agents to work for such industry. Call centre activities employ bulk of the workers among all BPOs. In 2008, call centre bureaus employed about 150, 000 workers ( Philippine National Statistics Office, 2010 ) . There are about 400, 000 Filipinos who are presently employed as call centre agents harmonizing to Rivette ( 2010 ) .

## **Name Center Agents**

Harmonizing to a policy provided by the Employment and Immigration Department of the Government of Alberta ( 2008 ) , call centre agents are the 1s who `` respond to inquiries and enquiries, construct client relationships, decide client jobs and supply information about company policies, merchandises and services over the phone and via electronic communicating. "

Working conditions from one call centre to another may differ. Harmonizing to that same policy, name centre agents normally work indoors but in a instead unfastened environment to diminish privateness. Further, directors are allowed to enter and supervise the conversations of an agent and his or her client. Working displacements besides differ from one bureau to another. Some bureaus provide services 24-hours a twenty-four hours, seven years a hebdomad.

## **Lifestyle of Call Center Agents and Associated Health Risk Factors**

Because of the nature of their work, name centre agents normally live a life style that may set them at hazard for development of certain diseases. First, name centre `` workers remained in a inactive sitting place 95 % of the clip " ( Rocha, 2005 ) which makes them prone to physical inaction that may take to fleshiness. Development of fleshiness is of significance because it is a hazard factor for the development of Diabetes Mellitus Type II harmonizing to the AACE Diabetes Mellitus Clinical Practice Guidelines Task Force of 2007.

Second, name centre workers are exposed to a extremely nerve-racking environment. Call centre workers `` identified call-time force per unit areas i. e. , holding to treat a client call within a specific figure of seconds as holding the strongest relationship to occupation emphasis " ( Di Tecco et Al, 1992 ) . Another survey identified `` holding to cover with hard clients as the most important beginning of occupation emphasis in 54. 0 % of call centre agents managing inbound services and 54. 4 % of call centre agents managing outbound services " ( Lin et al, 2010 ) . High degrees of emphasis can take to increased hydrocortisone degrees in the organic structure which is of significance because of its effects on organic structuremetamorphosis. Abnormalities in organic structure metamorphosis can take to metabolic jobs such asstress-induced fleshiness which may give rise to high blood pressure, lipemia, and hyperglycaemia ( Andrews, 2002 ) .

Third, the usual diet of call centre agents is high in cholesterin and fat and low in fibre which puts them at hazard for dyslipidemia and hypercholesteremia. In a survey conducted by the UP Population Institute, they identified the usual lifestyle picks of immature professionals in Metro Manila and Metro Cebu. They studied the economic, societal and wellness position of 929 immature professionals less than 35 old ages old working at call centres and non call centres. The survey revealed that `` there is a high degree of ingestion of french friess, Burgers, french friess and fried chicken " among the workers and `` a few figure consume instant noodles and street nutrient on a regular basis " . It was found out that fried poulet was the most popular nutrient pick among Business Process Outsourcing ( BPO ) workers



with 78 % stating that they consume it on a regular basis. French fries were the following most popular nutrient pick with 54 % stating they consume it on a regular basis, followed by french fries at 53 % and Burgers at 49 % . High caffeine consumption was besides reported in 2/3 of all immature professionals imbibing java daily. However, the survey pointed out that call centre workers drank more java than non-call centre workers. Call centre workers drank 2. 3 cups of java daily while non call centre workers drank 1. 7 cups daily. Tea consumption was besides reported where 1/4 of all call centre workers drank tea while merely 1/5 of non-call centre workers drank tea. The survey besides revealed that 50 % of all immature workers drink soda daily at an norm of 1. 5 bottles or tins daily.

The survey besides explored leisure activities of call centre agents. Based on the UP Population Institute study, 72 % of call centre agents said that their most common leisure activity is imbibing compared to partying ( 62 % ) or videoke catches ( 59 % ) . The survey said that overall `` there is a really high degree of current imbibing among workers " , 85 % for call centre agents and 87 % for non-call centre agents. Fatty nutrient and ingestion of intoxicant can increase triglyceride and cholesterin degrees which is a hazard factor for the development of diabetes ( AACE, 2007 ) .

Fourth, sleep want is common among call centre agents. In the same survey, they besides found out that alternatively of the recommended 8 hours of slumber, name centre agents merely acquire 6. 2 hours of sleep each twenty-four hours. Sleep want can take to metabolic perturbations and hormonal alterations doing fleshiness ( Merck ) and accordingly diabetes.

Fifth, due to tire and miss of slumber, name centre agents resort to smoke to get by with emphasis. They reported that `` 43 % of call centre employees smoke while merely 21 % of non call centre agents smoke '' . `` A call centre agent who smokes normally consumes 9 sticks a twenty-four hours on norm '' . Smoking is a known hazard factor for the development of coronary artery disease taking to high blood pressure and cardiac disease. Since high blood pressure and cardiac disease are risk factors for the development of Diabetes Mellitus Type II ( AACE, 2007 ) , smoking may so predispose an person in developing diabetes.

### **Diseases Associated with Call Center Employees**

An addition in the turnover, absenteeism, and occupational diseases in call centre employees resulted from deficiency of modernisation of procedures and organisational planning in call centres in Brazil ( Rocha et al, 2005 ) . A focussed group probe conducted in a call centre employed with 200 persons observed the `` presence of ailments of muscular hurting, tummy achings, sleep changes and crossness '' ( Westin in Rocha et Al, 2005 ) . Work-related muscular upsets were found to be extremely prevailing among the female than male call centre employees, specifically on the neck/shoulder part ( 43 % ) and on the wrists/hands part ( 39 % ) . It was observed that a combination of high demands and deficiency of work control among the female call centre employees A reflect a extremely nerve-racking occupation that predispose `` them to the increased hazard of holding musculoskeletal upsets ( Theorell in Rocha et Al, 2005 ) . The restrictions of the survey done by Rocha et Al ( 2005 ) are that the analyses were limited to one call centre

linked to a bank, cross-sectional design, little sample size, and symptom-based diagnosing ( such as hurting, numbing, giddiness, prickling esthesis, stiffening, firing esthesis ) .

In a survey done by d'Errico et Al ( 2010 ) , the presence of musculoskeletal symptoms in the same part was assessed utilizing the undermentioned inclusion standards to continue the specificity of the result, although it probably decreased its sensitiveness: a ) presence of musculoskeletal symptoms ( hurting, combustion, stiffing, numbness or prickling ) at any clip during the last 28 yearss and B ) audience to a physical and or self-medication because of the symptoms. Besides, the `` presence of any disease known to be associated with musculoskeletal upsets such as high blood pressure, diabetes, systemic lupus erythematosus, urarthritis, thyroid diseases, rheumatoid arthritis ) , old hurts in the last five old ages, leisure physical activity, organic structure mass index, smoke, matrimonial position, educational degree, gender, and age category were explored as possible confounders of the association between workplace factors and musculoskeletal symptoms. " It was found in this survey that 45 % of workers reported musculoskeletal symptoms wherein cervix ( 39 % ) symptoms were the most prevailing, followed by the shoulder ( 22 % ) , handwrist ( 10 % ) , and cubitus ( 4 % ) . Neck/shoulder symptoms were associated with `` low occupation control, elevated noise, hapless desk lighting and impossiblensness to tilt back while sitting. " Elbow/hand-wrist symptoms were associated with `` short intervals between calls, deficient

working infinite, deficiency of forearm support, occupation insecurity, and long senior status in the industry. "

Other survey that reported the presence of musculoskeletal symptoms among call centre employees were done by Halford and Cohen ( 2003 ) wherein computing machine usage factors and single psychosocial factors were significantly associated with self-reporting of musculoskeletal upset symptoms.

Sudhashree et Al ( 2005 ) stated in a column missive that the call centre industry in India ranked high for abrasion due to wellness grounds such as kiping upsets ( 83 % ) , voice loss ( 8. 5 % ) , ear jobs ( 8. 5 % ) , digestive upsets ( 14. 9 % ) and oculus sight jobs ( 10. 6 % ) . Burnout stress syndrome, which includes chronic weariness, insomnia, and complete change of biological beat of the organic structure are everyday cause for sickness absenteeism. Chronic degree of emphasis besides affects other systems of the organic structure such as the cardiovascular and hormone.

In a survey done by Lin et Al ( 2010 ) in a bank call centre in Taiwan, name centre employees have had prevailing ailments of musculoskeletal uncomfortableness, oculus strain, gruffness, and sore pharynx. Besides, it was found that those who perceived higher occupation emphasis had significantly increased hazard of multiple wellness jobs, including oculus strain, tinnitus, gruffness, sore pharynx, chronic cough with emotionlessness, thorax stringency, cranky tummy or peptic ulcers, and musculoskeletal uncomfortableness.

In the Philippines, there are no surveys about the wellness hazards and occupational diseases associated among call centre employees. However, there is a study of a rise in the figure of Filipinos infected with Human Immunodeficiency Virus ( HIV ) and includes the call centre employees ( Ruiz, 2010 ) .

## **Type II Diabetes Mellitus and Epidemiology**

Diabetes mellitus ( DM ) is a group of metabolic upsets wherein there is an addition in blood sugar ( hyperglycaemia ) ensuing from absolute or comparative lack of insulin, or both. There are many categorizations of this disease entity based on the diseased procedure that leads to hyperglycemia. In Type II DM, hyperglycaemia resulted from a scope of preponderantly insulin opposition with comparative insulin lack to a preponderantly insulin secretory defect with insulin opposition ( Fauci et al, 2008 ) . It normally occurs among the older age group ( & gt ; 30 old ages old ) but there is an increasing diagnosing in the younger group ( Tidy, 2009 ) . `` Most symptoms of diabetes appear really tardily in the phase of the disease. A batch of diabetics do non hold symptoms when their blood sugars are elevated for the first clip " ( National Objectives forHealth, 2005 ) .

There is a dramatic addition in the prevalence of Diabetes Mellitus worldwide, from ~30million instances in 1985 to 177 million in 2000. Type II DM is increasing more quickly because of `` increasing fleshiness and decreased activity degrees as states become more industrialised, " as in the instance of many developing states in Asia ( Fauci et al, 2008 ) . A countrywide prevalence study in the Philippines by the Department of Health

showed that four ( 4. 1 % ) out of one 100 Filipinos are diabetics, and the prevalence was higher in urban ( 6. 8 % ) than in rural ( 2. 5 % ) countries. The World Health Organization estimates that there will be a doubling of prevalence of diabetes in Southeast Asia every five to ten old ages. Using this as premise, the prevalence of diabetes in the Philippines is about 8 to 16 per centum ( National Objectives for Health, 2005 ) . Besides, the decease rate in diabetes has risen from 4. 3 per 100, 000 population in 1984 to 7. 1 per 100, 000 population in 1993. It is of import to observe that there is underreporting of deceases due to diabetes, as shown by local surveies, because of misclassification as deceases due to cardiovascular or nephritic disease both of which are chronic complications of DM ( National Objectives for Health, 2005 ; Fauci et Al, 2008 ) .

## **Type II Diabetes Mellitus Risk factors and Nosologies**

Harmonizing to the American Association of Clinical Endocrinologists ( AACE ) Medical Guidelines for Clinical Practice for the Management of Diabetes Mellitus ( AACE Diabetes Mellitus Clinical Practice Guidelines Task Force, 2007 ) , there are several hazard factors to developing prediabetes and Diabetes Mellitus. Such hazard factors are ( a ) household history of diabetes, ( B ) cardiovascular disease, ( degree Celsius ) overweight or corpulent province, ( vitamin D ) sedentary life style, ( vitamin E ) Latin american or Latino, Non-Hipic black, Asiatic American, Native American, or Pacific Islander ethnicity, ( degree Fahrenheit ) antecedently identified impaired glucose tolerance or impaired fasting glucose, ( g ) high blood pressure, ( H ) increased degrees of triglycerides, low concentrations high-

density lipoproteins cholesterol, or both, ( I ) history of gestational diabetes, ( J ) history of bringing of an baby with a birth weight  $\geq$  9 lbs, ( K ) polycystic ovary syndrome, and ( cubic decimeter ) psychiatric unwellness.

To name Diabetes Mellitus, any one of the three standards is sufficient in diagnosing the patient harmonizing to the AACE. These standards are: ( a ) symptoms of diabetes such as polyuria, polydipsia, unexplained weight loss and insouciant plasma glucose concentration of greater than or equal to 200 mg/ deciliter, ( B ) fasting plasma glucose concentration of greater than or equal to 126 mg/ deciliter, and ( degree Celsius ) 2-hour postchallenge glucose concentration of greater than or equal to 200 mg/ deciliter during a 75-gram unwritten glucose tolerance trial. A

### **Diabetes Mellitus Prevention**

A survey done by the Diabetes Prevention Program ( DPP ) showed that intensive alterations in life style, quantified as diet and exercising for 30min/day five times/week in persons with impaired glucose tolerance ( IGT ) delayed the development of Type II DM by 58 % . ( Harrison 's, 2008 ) . It was besides found out that Metformin slowed down the patterned advance or halted the development of Type II DM by 31 % compared to placebo. Peoples with a strong sensitivity to diabetes due to household history or impaired glucose tolerance or impaired fasting glucose ( IFG ) , are strongly advised to keep a normal BMI and prosecute in regular exercising.

Harmonizing to the recent ADA Consensus panel, persons with IFG and IGT who are at a high hazard for patterned advance to diabetes ( age  $\geq$  60 old ages, BMI  $\geq$  35 kg/m<sup>2</sup>, household history of diabetes in the first-

degree, elevated triglycerides, reduced HDL, high blood pressure, or A1C > 6.0 % ) could be appraised for Metformin intervention but not other medicines.

### **Acute complications of DM**

The acute complications of diabetes are diabetic ketoacidosis ( DKA ) and hyperglycemic hyperosmolar syndrome ( HHS ) . Both upsets are associated with absolute or comparative insulin lack, volume depletion, and acid-base abnormalities. These may take to serious complications if not quickly remedied.

### **Diabetic Ketoacidosis**

The usual signs and symptoms of DKA are nausea and vomiting, hyperglycaemia, hypotension, Kussmaul respirations, fruity odor on the patient's breath, inordinate thirst, and polyuria. DKA is characterized by hyperglycaemia, ketonemia, and metabolic acidosis that is accompanied by secondary metabolic abnormalities.

### **Hyperglycemic Hyperosmolar State**

HHS may normally be seen in an aged person with Type II DM, with symptoms of polyuria, weight loss, and lessened oral consumption that preceded mental confusion or coma. Physical scrutiny shows profound desiccation and hyperosmolarity with concomitant hypotension, tachycardia, and altered mental province. In contrast to DKA, HHS does not present with nausea, vomiting, abdominal pain and Kussmaul signs.



## **Chronic complications of DM**

The chronicity of the disease brings about systemic engagement that affects multiple organ systems. Complications may be divided into nonvascular and vascular complications. Nonvascular complications include gastroparesis, tegument alterations, and cataracts. Vascular complications can be farther subdivided into micro and macrovascular. Microvascular alterations, which result from long standing hyperglycaemia include retinopathy, neuropathy, and nephropathy. Macrovascular alterations include coronary arteria disease and peripheral arterial diseases.

## **Aims**

With the nature of the work and environment in a call centre industry, the survey aims to find if working in a call centre predisposes an person to the development of Type II diabetes mellitus ( DM ) . Specifically, it aims:

To find the incidence of Type II Diabetes Mellitus within the period of survey.

To find the etiologic factors associated with the development of Type II Diabetes Mellitus.

## **Mentions**

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