

1 The Challenges of the Elderly Population with Alzheimer's and 2 Dementia in Honduras

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7 **Abstract**

8 The purpose of this paper is to analyze the number of Alzheimer's and Dementia incidences
9 occurring in Honduras and afford recommendations to improve public health policies to assist
10 the elderly. According to The Institute for Health Metrics and Evaluation (2016), there has
11 been an increase in the number of Alzheimer's incidences in Honduras. Moreover, the number
12 of Alzheimer's cases has increased by 51.4

14 *Index terms—*

15 **1 Introduction**

16 or years, Alzheimer's and Dementia have been a focal point globally.

17 According to Ferri et al. (2005), from a global perspective, approximately 24 million people have Dementia
18 with a potential increase of 3.4 million cases annually. Ferri et al. (2005) further states the number of dementia
19 cases will reach approximately 81 million incidences by 2080. Additionally, a recent report suggests to expect
20 an increase in the number of Alzheimer's incidences in Honduras. It is critical that the country prepare for a
21 possible surge of Alzheimer's incidences in the upcoming years. Also, the country's economy continues to improve
22 somewhat, but health investment costs per person is the lowest globally. In the end, the research will provide the
23 risk factors associated with Alzheimer's and Dementia patients in Honduras and recommendations for improving
24 epidemiology efforts to focus attention in key areas most affected.

25 **2 II.**

26 **3 Literature Review a) Theories of Alzheimer and Dementia**

27 In 1901, Dr. Alois Alzheimer, a German psychiatrist and neurologist, treated a patient, Auguste Deter, a 51-year-old
28 woman who had symptoms of progressive functional and cognitive impairment. After five years of observation,
29 the woman died, and her brain Though significant research on Alzheimer's is well documented, there is still no cure
30 for the deadly disease ??Livingston & Frankish, 2015). About 18 million individuals have Alzheimer's globally,
31 which is common in dementia patients. Researchers have suggested that Alzheimer's patients are approximately
32 65 or older, but there have been cases of younger patients, which is out of the ordinary (Posner et al., 2015).

33 A significant change to Latin American countries has been noted with a substantial increase in the elderly
34 population, which has increased the number of Alzheimer's patients (Nitrini et al., 2009). The average age of
35 longevity among patients stands about four years to 20 years, which depends on the overall health condition of
36 the patient (Nitrini, et al., 2009).

37 **4 b) Honduras; Public Health Policy Discussions**

38 Honduras' health system is going through significant changes. Due to the limited capabilities/ was extracted and
39 examined. After further inspection, the patient's brain had calcified amyloid plaques and neurotically tangles,
40 which affected her social functions. In doing so, Dr. Alzheimer was credited for the discovery of the first of the
41 Alzheimer's disease incidents (Ferri et al., 2005). Dementia has severe symptoms that include progressive memory

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42 loss, the inability to communicate/ reason, and a drastic change in personality (Butcher, 2018) the elderly are
43 between the ages of 60-69 and are living in extreme poverty and yet increases to 51.2% within the age group
44 of 70-79. Moreover, a small number of Honduras' elderly reside in urban areas, where most progressive health
45 services are situated, leaving the others who live in rural areas unable to take advantage of these services Pan
46 American Health in the Americas (2017, p. 169). According to the Honduras' People 2018, CIA World Factbook
47 (2018, February), Honduras is considered the most impoverished country in Latin America despite their efforts
48 to improve the overall country's economic condition.

49 Most notably, throughout the years, the Honduras' government has made significant improvements to the
50 public health system. In Figure ??

51 5 c) Alzheimer's and Dementia Efforts in Honduras

52 Due to the increase of neurological diseases surging in developing countries, such as Honduras, there is a limited
53 number of trained neurologists caring

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55 The Institute for Health Metrics and Evaluation) From the population totality, about 55.5% reside in rural
56 areas and 44.5% in urban areas. Moreover, 47% of the population is 18 years of age while adults older than
57 60 years of age represent 5.7% of the total population and are the most vulnerable group. According to Pan
58 American Health Org (2017, p. 169), from a socioeconomical perspective, Honduras' elderly tend to suffer more
59 due to their declining health condition. Additionally, about 46% lack formal education of which 79% do not have
60 social security. Also, about 44.5% of for patients (Medina et al., 2007). In collaboration with the Honduran
61 Security of Health, the National Autonomous, University of Honduras (UNAH), a Neurology Department within
62 the University system was established to increase the number of the country's neurologists. Over the years,
63 period covering 1998 - 2006, a 31% increase in the number of neurologists in the country was reported (Medina
64 et al., 2007). Though there have been improvements made to reducing morbidity and mortality of neurological
65 outcomes, there is still room for improvement.

66 The World Life Expectancy (2017) website reports the totality of Alzheimer's and Dementia deaths under one
67 category heading entitled Alzheimers/ Dementia.

68 Graph 1 reports the death rate per 100,000 among Alzheimers/Dementia patients residing in Honduras.
69 Accordingly, the following were reported: Females at a rate of 17.72 as compared to Males at a rate of 15.84 with
70 a total average combined rate of 16.83 and the country being ranked 101 among other countries globally.

71 6 Conclusion

72 Honduras has made considerable changes to governance and public health policies over the years. In the 1990s,
73 Honduras championed a reduction in maternal mortality rates, but due to their social, political, and economic
74 factors, it drastically prohibited the country from progressing in other relevant public health policies ??Johnson,
75 2010, p. 11).

76 There seems to be a disconnection among public health outcomes for the elderly population. Most of the seniors
77 reside in the rural areas and most do not have a formal education and are unable to take care of themselves.
78 Moreover, most of the elderly services are situated in urban areas and; therefore, are unavailable to others who
79 reside in the rural areas of the country.

80 Over the years, a dramatic increase in the number of Alzheimer's incidences has been observed. It is critical that
81 the Honduras' government review current public health policies and include elderly short/long term assistance.
82 The Honduras' government should make a consorted effort to improve public health polices, particularly for those
83 who are unable to support/fend for themselves and rely on a family member(s) for assistance.

84 IV.

85 7 Recommendations

86 Studies have suggested an increase in the number of the elderly population (older than 60) in Latin America in
87 the upcoming years, which will result in a surge of Alzheimer's incidences (Nitrini et al., 2009). This is consistent
88 with the number of Alzheimer's Most importantly, Honduras can consider renewing public health policies to
89 solidify epidemiology efforts. By doing so, it can gear up for the future in the event of an upturn of Alzheimer's
90 disease incidences, particularly in the rural areas reported.

91 Additionally, Honduras should consider other steps to improve medical outreach programs for the elderly
92 residing in rural areas, like Japan's innovative Kakaritsuke program.

93 In 2012, the Japanese government established the Kakaritsuke physicians program. The Kakaritsuke are not
94 practicing physicians, but rather general practitioners who mostly practice in rural areas to deal with the elderly
95 population. The Kakaritsuke physicians are limited to only advising patients on how to stay fit/healthy and to
96 make sure they stay active (Japan renews primary health care to promote healthy aging, 2018). This program
97 has led to the improvement of medical outreach among the Japanese elders, particularly those with Alzheimer's
98 disease.

	Expected		Observed	
	1990	2016	1990	2016
Females	64.8	72.5	67.2	73.7
Males	61.3	67.1	67.4	71.6

Life expectancy, 1990-2016

Figure 1:

99 In short, should the recommendations be considered, it will afford the Honduras' government an opportunity
 100 to rethink their public health policies in preparedness for the influx of Alzheimer's disease patients in the future.
 101 ¹ ²

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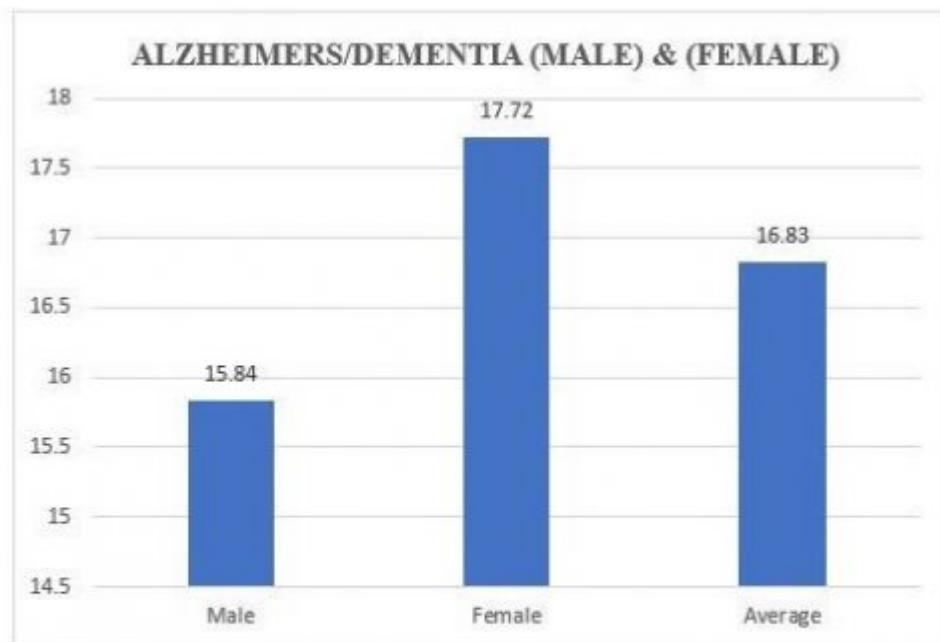
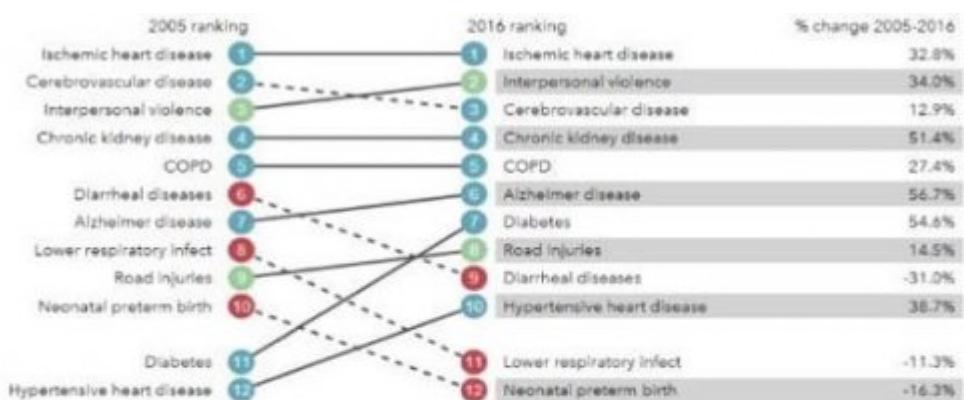


Figure 2:



Top 10 causes of death in 2016 and percent change, 2005-2016, all ages, number

Figure 3:

Abstract-The purpose of this paper is to analyze the number of Alzheimer's and Dementia incidences occurring in Honduras and afford recommendations to improve public health policies to assist the elderly. According to The Institute for Health Metrics and Evaluation (2016), there has been an increase in the number of Alzheimer's incidences in Honduras. Moreover, the number of Alzheimer's cases has increased by 51.4% from 2005-2016. The findings suggested that the country needs to consider a reevaluation of public health policies to tackle the influx of Alzheimer's incidences in the upcoming years. Though the elderly population stands at a little less than 6% of Honduras; total population (Bermúdez-Madriz et al., 2011), it is critical that the elderly community be afforded the best possible healthcare services available. Research suggests that most of the elderly community reside in rural areas where minimal healthcare services are available. In the end, the recommendations will be afforded for the improvement of public health policies to assist the elderly and preparedness for the surge of Alzheimer's disease in the country.

1. Alzheimer's Disease: Patient has difficulty

communicating with others, experiences mood changes and personality changes, and is unable to reason as well as other neurological symptoms that may occur (McKhann et al., 2011). 2. Vascular Dementia: Results in urinary frequency more often than regular occurrences (Sakakibara et al., 2012).

3. Frontotemporal Dementia: An individual may experience mood swing changes as well as trouble communicating verbally (Bang, Spina, & Miller, 2015).

4. Dementia with Lewy bodies: Resembles Parkinson's disease resulting in visual hallucinations and sleeping disorders (Walker, Possin, Boeve, & Aarsland, 2015).

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resources from the Honduras' government, it is challenging to afford the general population with adequate healthcare coverage (Carmenate-Milián et al., 2017).

According to The Institute for Health Metrics (2016), Honduras' population is about 8.3 million from 8,045,990 million reported by Bermúdez-Madriz et al. (2011) and Honduras, Encuesta Permanente de Hogaresde Propósitos Múltiples (2009).

Year 2019

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Figure 5:

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