

## ABSTRACT

Alzheimer's disease is a public health priority which has been researched for many years in the hope of finding a cure soon. Costa Rica has made significant progress in many areas of research; however, the research carried out in the country on Alzheimer's disease is very scarce. The present poster presents the challenges of developing scientific Alzheimer's research in Costa Rica by reviewing current scientific research on Alzheimer's in Costa Rica and by conducting interviews with Costa Rican professionals who have conducted Alzheimer's research. The lack of investigative training of doctors, the difficulties in accessing patient data, and the lack of medical-scientific dialogue are shown as the greatest challenges to overcome in order to remedy the situation. Any Costa Rican scientist planning to do research on Alzheimer's area should be prepared to encourage medical-scientific dialogue and stimulate the progress of Alzheimer's research.

## INTRODUCTION

In a recent study of the state of Alzheimer's research in Costa Rica, Fornaguera, Segura and Montero (2018) state that of all the research carried out on Alzheimer's in Costa Rica, only 30 research articles were found that used data from Costa Rican patients.

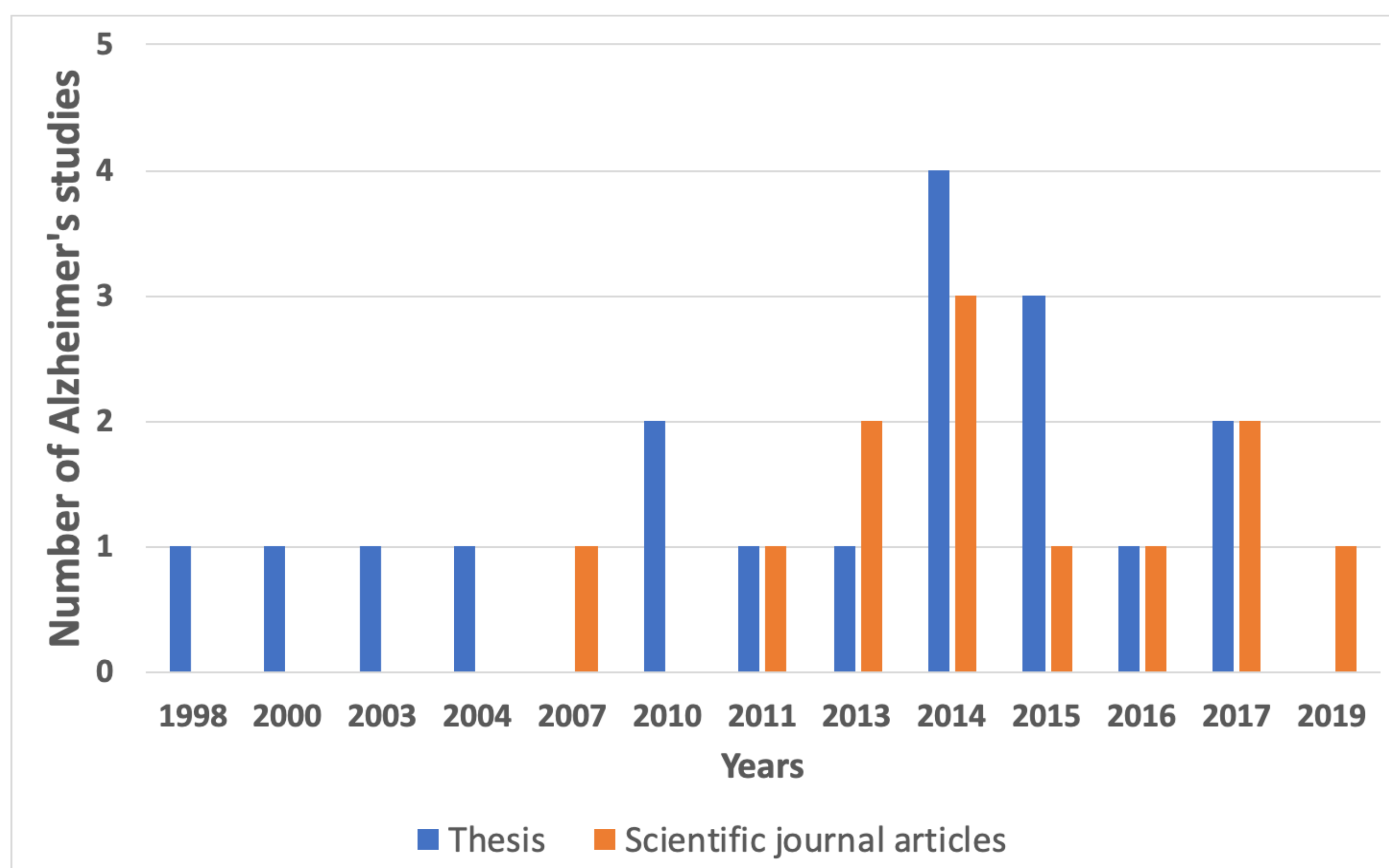


Figure 1. Alzheimer's studies in Costa Rica. Data for Thesis and Scientific journal articles of Alzheimer's disease in Costa Rica from Fornaguera, Segura and Montero (2018)

According to the INEC (n.d.), the estimated percentage of the elderly population for 2050 will be almost 20% of the total Costa Rican population, which shows the importance of increasing research on Alzheimer's disease.

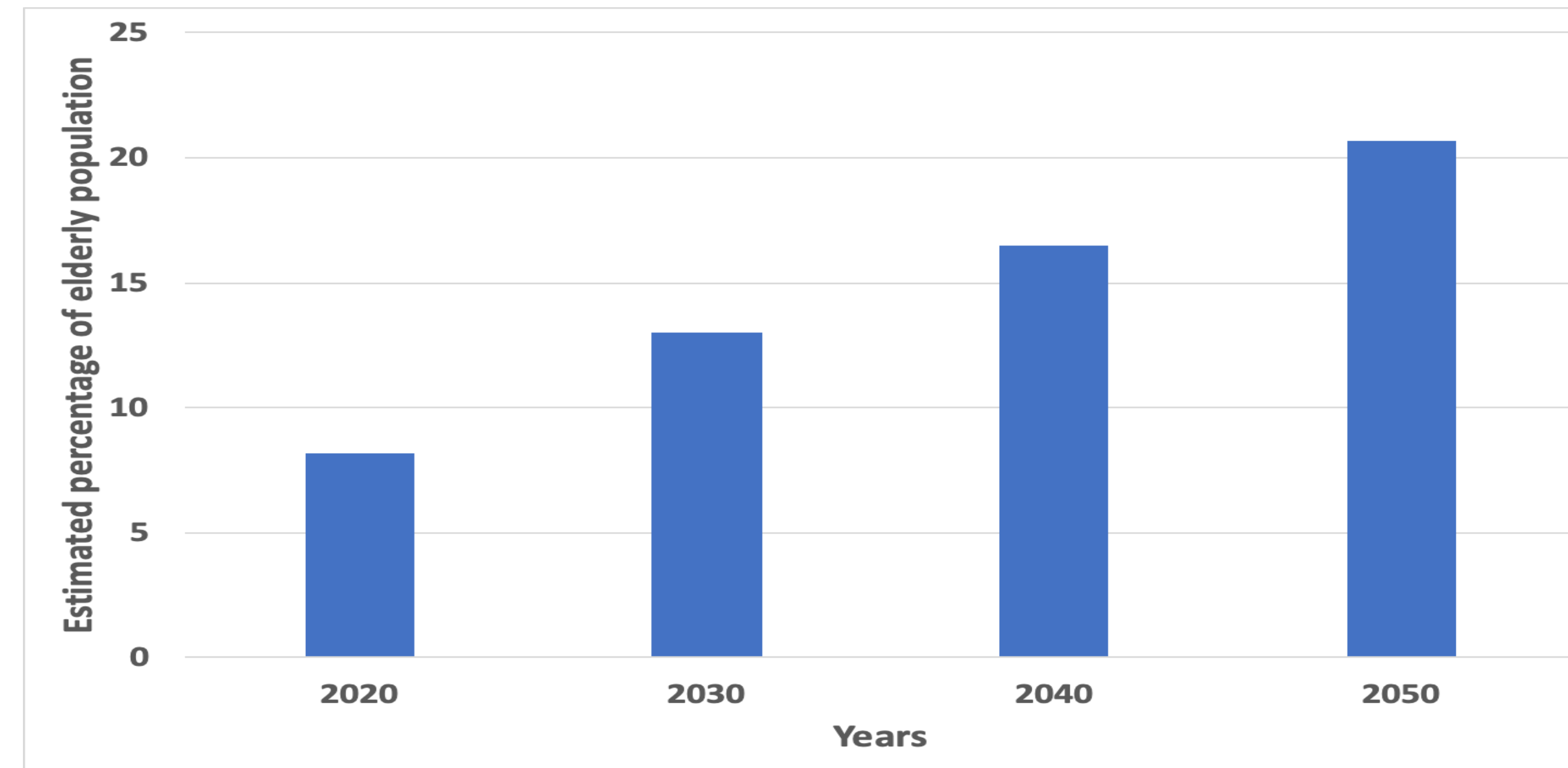


Figure 2. Estimated percentage of the elderly population in Costa Rica by 2050. Data for estimated percentage of the elderly population in Costa Rica from INEC (n.d.)

The lack of doctors trained to conduct research, restrictions on the use of data from Costa Rican patients, lack of scientific dialogue among medical experts, lack of useful patient data for research and the restrictions imposed on doctors wanting to do research, are currently impeding the advancement of research in the Alzheimer's in Costa Rica.

## CHALLENGES OF ALZHEIMER'S RESEARCH IN COSTA RICA

### 1. Lack of doctors trained to conduct research

- Very few doctors were trained to conduct research, and those who are interested in conducting research have a large amount of data, but they do not know how to use that data. (J. Fornaguera, personal communication, July 24, 2020)
- As asserted by Jain, Yamada and Lefkowitz (2019), and Jacob (2016), having doctors who know how to carry out scientific research will generate new scientific knowledge that can be applied to improving existing therapies or treatments.

### 2. Restrictions on the use of data from Costa Rican patients

- In dementia clinics in Costa Rica many patient data are handled, with many variables to investigate, but researchers run into restrictions that do not allow them to publish patient data.

### 3. Lack of scientific dialogue among medical experts

- The fact that there is no fluid communication among the scientific, clinical and political stakeholders (J. Fornaguera, personal communication, July 24, 2020) blocks Alzheimer's research, as dialogue is critical for any investigation to begin.

### 4. Lack of useful patient data for research

- As mentioned by Park (2013), the electronic medical records were not built for the purpose of being used for research.

### 5. Restrictions imposed on doctors wanting to do research

According to D. Valerio (personal communication, July 24, 2020), another dilemma that doctors have encountered is the following:

- Doctors who are currently treating Alzheimer patients are required to resign from their positions and dedicate themselves solely to research.
- Doctors who do resign from the positions cannot see patients at the dementia clinic.

## POSSIBLE SOLUTIONS

- Doctors trained in research mentor those who want to learn to conduct Alzheimer's research studies.
- Advocate for lifting current restriction on patient data to allow researchers to make use of this data, since without data it is impossible to do research.
- Explore all possible avenues to encouraging collaboration among doctors, scientists and politicians.
- Establish a central database with all Alzheimer's patient data for data scientists to contribute to research.

## CONCLUSIONS

- Costa Rica has high quality medical experts, a large number of specialists in data management, and all the necessary tools to increase Alzheimer's research, and thus allow for the discovery of new information that can further progress in this area.
- Current laws must be appropriately amended to facilitate research and thus motivate more scientists to undertake research in the area of dementia.
- One of the big problems in recent years years has been the bureaucracy, and it is up to the younger generation to seek and advocate for solutions to remedy the current situation.

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