Estimation And Prediction Of Hospitalisation And Medical Care Costs

Category: Data Analytics

College: Shree Ramana Degree College.

Team ID: LTVIP2023TMID00295

Team Leader: AYALURU BALAJI SHIVA

Team Member: AETURI CHAKRADHAR

Team Member: P SHARATH

Team Member: M K GOPINATH

Team Member: KASUVU RAMESH

Documentation Index:

S.NO	TITLE	PAGE NO
1	INTRODUCTION	2
2	LITERATURE SURVEY	3
3	THEORITICAL ANALYSIS	4
4	RESULT	5-18
5	ADVANTAGES &DISADVANTAGES	19
6	APPLICATIONS	19
7	CONCLUSION	20
8	FUTURE SCOPE	20

1.INTRODUCTION:

1.1 Overview:

Medical costs are one of the most common recurring expenses in a person's life. Based on different research studies, BMI, ageing, smoking, and other factors are all related to greater personal medical care costs. The estimates of the expenditures of health care related to obesity are needed to help create cost-effective obesity prevention strategies. Obesity prevention at a young age is a top concern in global health, clinical practice, and public health.

To avoid these restrictions, genetic variants are employed as instrumental variables in this research. Using statistics from public huge datasets, the impact of body mass index (BMI) on overall healthcare expenses is predicted.

1.2 PURPOSE OF THE PROJECT:

Medical care has several important functions other than restoring or maintaining health. These other functions are assessment and certification of health status, prognostication, segregation of the ill to limit communication of illness, and helping to cope with the problems of illness--the caring function.

- Covers medical-related expenses.
- Ensures access to preventive care.
- Funds dental treatment.
- Gives add-on coverage for critical illnesses.
- Offers a cashless claim benefit.
- Ensures funding for alternative treatment.
- Provides for domiciliary treatment.

2. LITERATURE SURVEY:

2.1 Existing problem:

EXISTING PROBLEMS IN MEDICAL CARE COSTS:

- Preventable medical errors
- Lack of transparency
- Poor amenable mortality rates
- Difficulty of finding a good doctor
- High costs of care
- A lack of insurance coverage
- The nursing and physician shortage.

2.2PROPOSED SOLUTION:

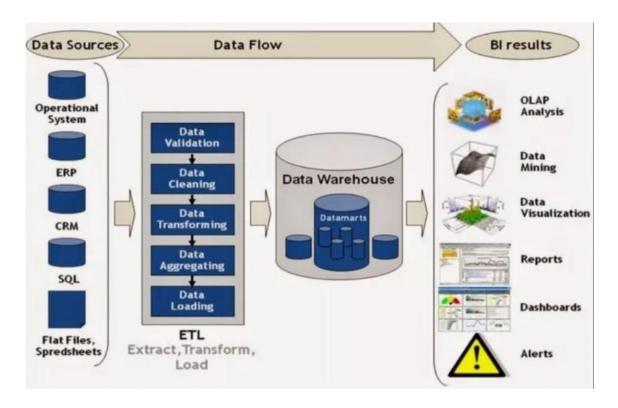
PROPOSED SOLUTION FOR MEDICAL CARE COSTS:

- Expand insurance to cover health care costs
- Extend tele health services
- Invest in mobile clinics
- Educate the public about multiple health care sites
- Improve cultural responsiveness

3. THEORETICAL ANALYSIS

3.1 BLOCK DIADRAM

Cost-benefit analysis is the examination of a decision in terms of its consequences or costs and benefits. The shadow price of a good measures the net impact on social welfare of a unit increase in the supply of that good by the public sector. The theory of cost-benefit analysis is widely used.



3.2 HARDWARE / SOFTWARE DESIGNING

HARDWARE REQUIREMENTS:

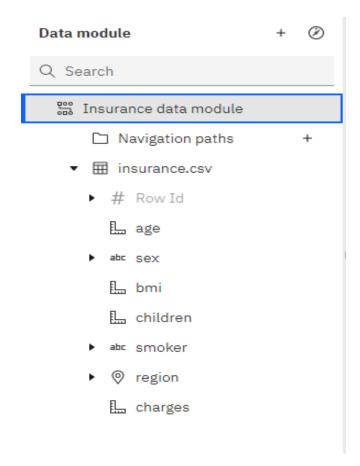
- Smart phone
- Laptop

SOFTWARE REQUIREMENTS:

- Anaconda Navigator
- Python, Spyder
- IBM Cognos, MS Word

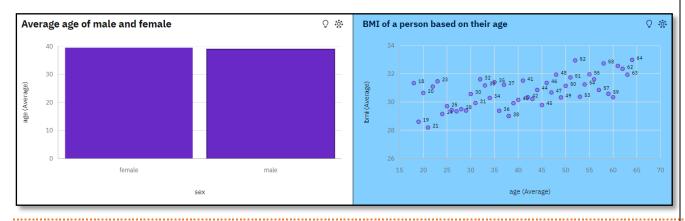
4. RESULT:

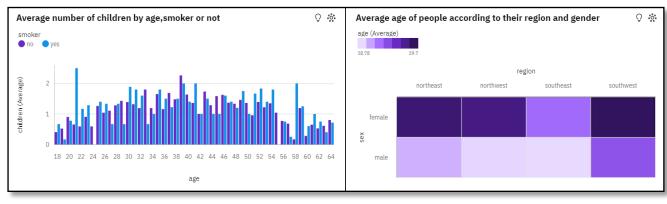
DATAMODULE:



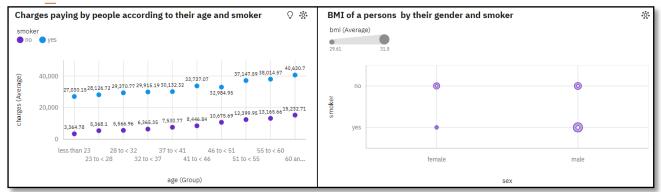
DASHBOARD:

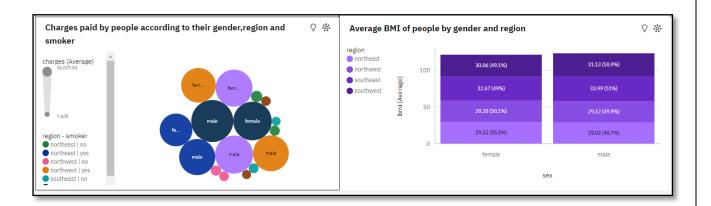
TAB_1:



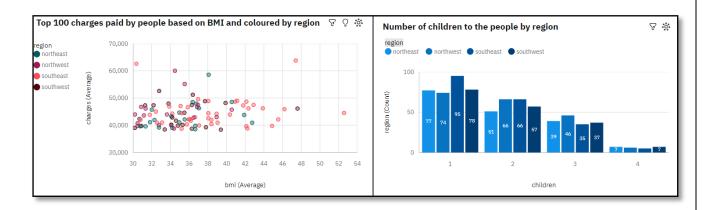


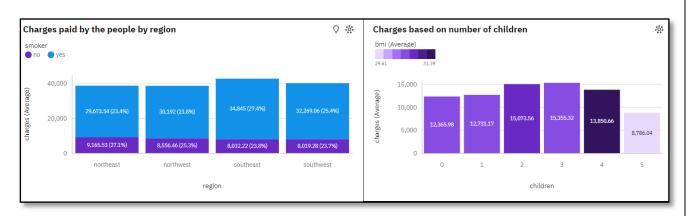
TAB 2:





TAB_3:



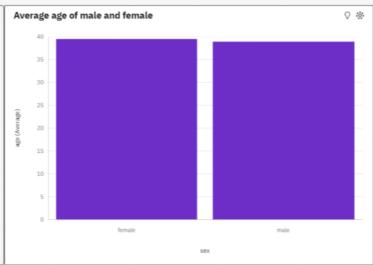


STORY



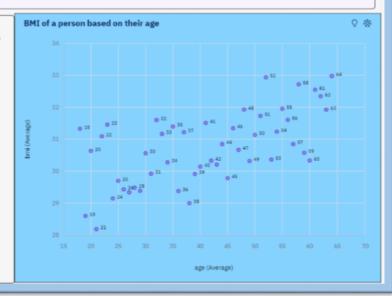
MEDICAL CARE COSTS STORY

- This graph mainly represents the average age of males and females.
- The average age of females is higher despite having a little bit less number of females in overall dataset.



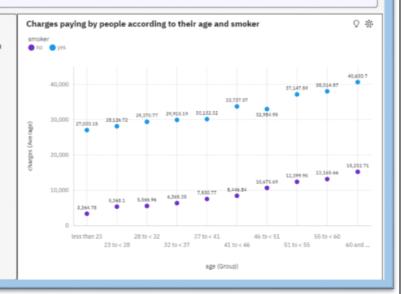
MEDICAL CARE COSTS STORY

- As age is increasing average BMI of persons also increases. This means BMI and age are linearly proportional.
- The maximum value of BMI in middle age is little bit higher than other age group.



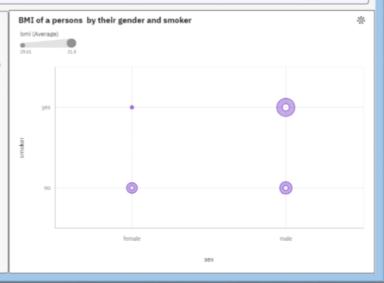
MEDICAL CARE COSTS STORY

- Smokers of any age are paying more than non-smokers, the value is also almost 3 to 5 times higher.
- Charges are getting increased as the age is also increasing in both the scenarios.



MEDICAL CARE COSTS STORY

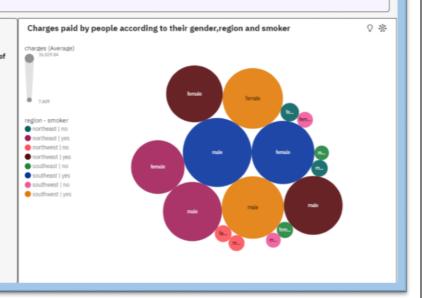
- Males and smokers have the highest average BMI value compared to all.
- · Females and smoker have less average BMI value compared to all.
- · Increase non-smokers irrespective of gender as their average BMI is almost similar



MEDICAL CARE COSTS STORY

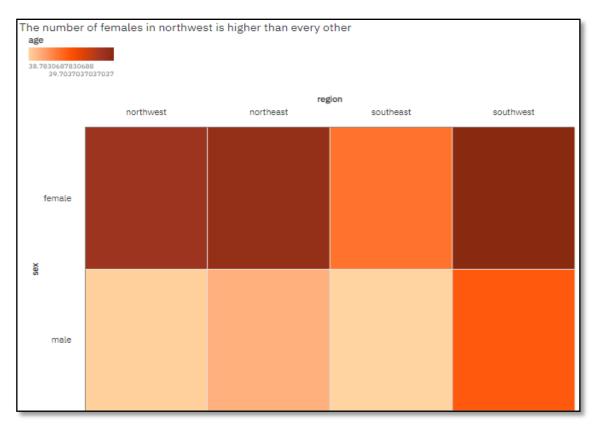
- · Southeast region people both men and women are paying more
- charges compared to other regions.

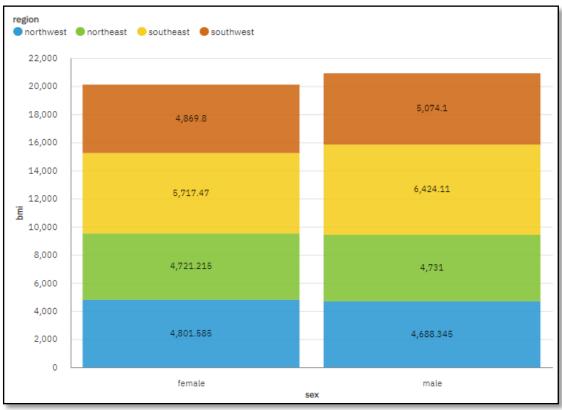
 Southeast region smokers are the ones paying more charges.
- Out of all we have seen smokers tend to pay more irrespective of
 - region.

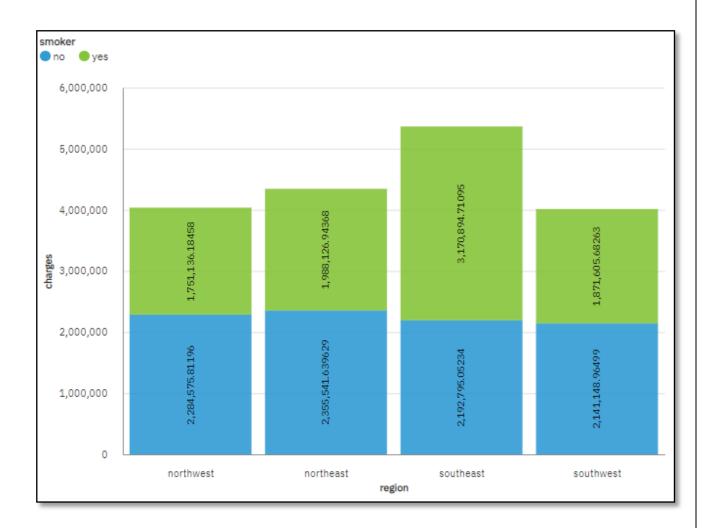


Smoking is not only injuries to health but also for wealth

REPORT



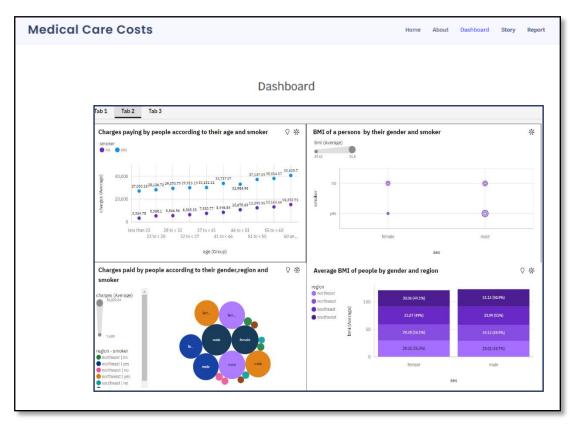


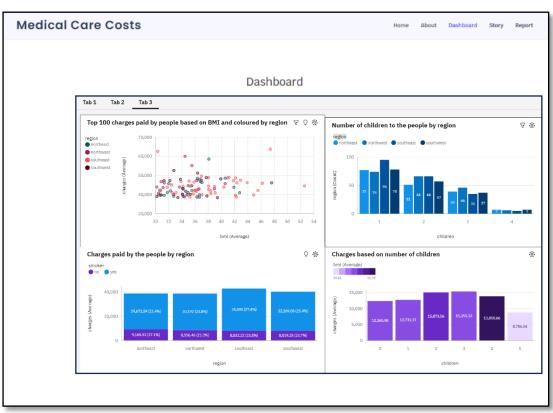


WEB INTEGRATION



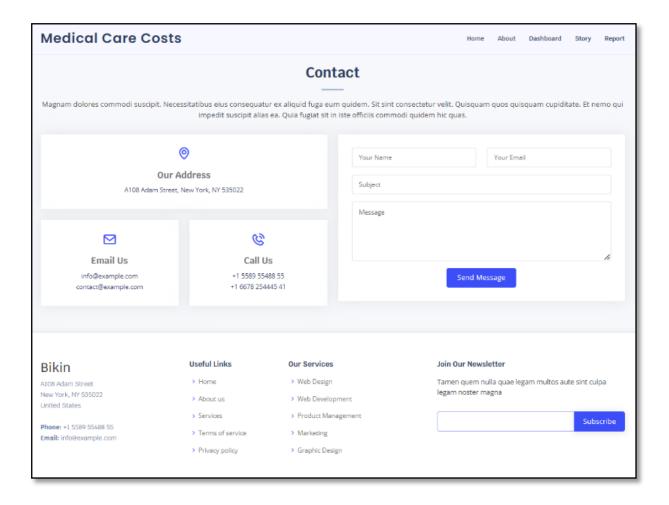












5.ADVANTAGES & DISADVANTAGES

ADVANTAGES

- Increased Access to Health Services.
- Improved Quality of Care.
- Focus on Prevention.
- Early Management of Health Conditions.
- Characteristics of Primary Care Delivery.
- Reduced Need for Specialist Care.

DISADVANTAGES

- Inadequate Outlay for Health.
- Social Inequality.
- Shortage of Medical Personnel.
- Medical Research.
- Expensive Health Service.

6.APPLICATIONS

- To measure the economic burden of illness to society.
- Improve patient engagement.
- Enhancing medical environments with lot implementation.
- Enhance data management.
- Improve prescription alerts.
- Immediate access to care-anytime, anywhere.
- minimize risks of misdiagnosis.

7. CONCLUSION

Health is a basic human right, and improvements in healthcare should be a goal of every country. Successfully improving the efficiency and quality with which care is delivered is an enormous challenge, one that will require substantial investment in research, new information systems, performance incentives, and education, with the hope of transforming how health care is delivered by thousands and thousands of providers dispersed across our largely disaggregated health care system. Health care costs plays an important role in every human life.

8.FUTURE SCOPE

- Technological developments.
- Shifting demographics.
- Changing healthcare regulations.
- Advances in digital healthcare technologies, such as artificial intelligence, VR/AR, 3D-printing, robotics or nanotechnology.
- Improve processes, facilitate data-driven decisions, and enhance interactions with healthcare professionals.