

A Meta- Analysis of various Medical Condition with Usability evaluation of Human Health Research Web Based Portal Study involving 500 Participants Data Analysis of Medical Condition

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Abstract

Human Health Research Portal is now offering a free web based and secure medical updates portal to enable hospitals, healthcare providers, researchers, pharmacist, doctors get to know about the recent updates in health care. Human Health Research portal which is a website that collects health related information from original source and presents followers with the most appropriate information for their context. Social network site and medical management are strong combination. Social networks have been deep pockets in 2020s and not just for Generation Y. 1980s and 1990s are been using social network site to look and share information on one scrolling platform. Human Health research is a web based portal systems used in medical management, including promote awareness to people, inspire patient engagement, and sharing accurate health information in the post. Sometimes raising awareness is as simple as reminding followers about common sense health center or communicating proper healthy living concerns. Has technology is updating social network sites are the key to make sure that public is aware of latest guidelines, issues and monitor. So, the best way to get medical updates out there is to share original source information in social network platforms.

Keywords: Human health research; Various medical condition; Web based portal survey; Hypothyroid; Social media platform

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Introduction

From a male patient with cold allergy to a 38 year old who has 3 kidneys, a number of controversial and strange medical conditions or the medical cases caught the attention of many in 2020. Having your pee turn green can be scary. But as a man in Chicago found out, green pee can be rare side effect of some medications.

The 62 year old man was hospitalized after he was found to have high levels of carbon dioxide in the blood, a condition that can be life threatening. The man was placed on a ventilator and given a general anaesthetic called propofol, according to report of the case published in The New England Journal.

People can develop allergies to pretty much anything, including cold air. That was for a man in Colorado, who allergic reaction to the cold was so severe, he almost died.

The 34 year old man collapsed after he stepped out of a hot shower into a cold bathroom, according to report of the case

published in The Journal of Emergency Medicine. The man was struggling to breathe, he experienced a life threatening allergic reaction in his entire body. Such an allergy is called "anaphylaxis" [1].

Review Literature

- WHO leaves primary causes of death and disability worldwide from 2000- 2019.
- Non communicable diseases compose 7 of the world's top 10 leading causes of death, according to data published in world health organization.
- WHO marked the need for preventing and treating disease like: cardiovascular diseases, cancer, diabetes and chronic respiratory diseases, tackling injuries, in all countries of the world, as set out the planning for the UN Sustainable Development Goals.
- Heart disease remains the top 1 killer in the world at the

same time it has remained the leading cause of death at the global level for the last 20 years. The number of deaths from heart disease increased by more than 2 million since 2000, to nearly 139 % in 2020 because of ischemic heart disease.

- Alzheimer's disease and dementia ranked 3rd in Americas and Europe in 2019, 50 million deaths and has of now 60% to 70% rise of cases. Women are one sided affected.
- Deaths from diabetes affect 422 million globally, 1.6 million deaths every year, 80% rise in deaths among males, deaths in eastern mediterranean have doubled, india is called the diabetes capital of the world. Not just these alarming numbers, the fact that the condition is even affecting the younger generation, makes it a matter of concern. You will be surprised to know 3/100,000 children are diagnosed with type 1 diabetes every year.
- In 2017, pneumonia and other respiratory infections were the deadliest group of communicable diseases, it ranked as 4th major cause of death, 15% of deaths of childrens under age of 5. In recent reports 2020 in January and mid November 2,500 U.s children died.
- HIV/AIDS dropped from the 8th leading cause of death in 2018 globally 37.9 million people are infected and in 2018 770,000 deaths occurred, it is fourth major cause of feath in African countries.
- Tuberculosis is also no longer in the global top 10, in 2019 1.4 million people died from tuberculosis and 208 000 with HIV infection globally, top 10 deaths in African and south- east asian regions and it is the 4th and 5th major cause globally.
- A 2020 review concluded that hypertension is the major risk factor for cardiovascular disease and premature death worldwide and that prevalence is growing. In may, the American Journal of Hypertension study published addressing the relationship between hypertension, hypertension medication, and COVID-19.
- Estimates further confirmed for longevity: 2019 people were living more than 6 years longer than in 2000, with a global average of more than 73 years in 2019 compared to nearly 67 in 2000 Heart disease, diabetes, stroke, lung cancer and chronic obstructive, pulmonary disease were collectively responsible for nearly 100 million additional healthy lifestyle lost in 2019 compared to 2000.
- While India has managed to beaten polio and small pox, but there are yet so many health ailments that need to be overcome. Anemia and malnutrition one among them. A recent report by the National Family Health Survey (NFHS-5) conducted a survey on the improvement in Womens Health and Welfare, states that teenage pregnancy in India has been reduced from 8.3% to 7.6% and there has been a considerable drop in marriages before 18yrs of age. It further concluded that at least two in three women aged between 15-49 in Assam have anaemia. It further marked 9 in 10 women in the age group

between 15 and 49 are anaemia in the union Territory of ladkh. While in west bengal, 3 out of 4 women are anaemic, In most of the states, every 4th women suffers from anaemia [2].

- As of now, COVID-19 has killed more than 85 million lives. People living with pre- existing medical conditions (such as heart disease, diabetes and respiratory conditions) are at higher risk of complications and death due to COVID- 19.
- In 2021 top priority is to achieve access to safe and effective vaccines, tests, and treatments and to make sure that health systems are strong enough to deliver them.
- Targets for the ACT- Accelerator in 2021 include: distributing 2 billion vaccines; 245 million treatments; establishing testing for 500 million people in low and middle income countries; and strengthening the health systems needed to support them.
- Health organizations will endorse and reinforce the high quality, safety and efficacy of our own core technical functions, to provide globally with the best evidence-based recommendations for public health on issues ranging from Alzheimers to zika.
- Health Organization will confirm work with partners to enforce the new 10 year health map for Neglected Tropical Diseases (NTDs), with its global targets and milestones to prevent, control, knock out and extinguish 20 NTDs.
- And they will concentrate efforts to end AIDS, tuberculosis and malaria and to eliminate viral hepatitis by 2030.

Objective

- Evaluating the predictability of medical conditions from Human Health Research Web portal.
- Main objective is to improve diagnosis in medical management and attain to the growing lifestyle for change in this crucial area of health research to improve quality of life and safety.

Methodology

Step 1: Literature read from peer reviewed research paper.

Coronavirus

While the pandemic stand on end of normal life, hospital across the country are taking on this unparalleled challenge, as front line health care workers demonstrate extraordinary bravery. According to recent report globally COVID-19 has emphasized more than 93.8 million active cases, 51.7 million recoveries, 2.01 million deaths. People living with pre-existing medical conditions like heart disease, diabetes and respiratory conditions are at greater risk of developing complications due to COVID- 19 [3].

Diabetes

According to CDC update diabetes is the 7th major cause of death in the united states. Wide ranging U.S population around 34.5 million people have diabetes, 95% people have type 2 diabetes.

Lung cancer

It is a 3rd major cause globally. In 2019 according to American cancer society 228,150 active cases, 2nd most common cancer, 142,670 people died from this cancer.

Depression

264 million people suffer from depression, women are more affected by this mental disorder, 85% people in middle income countries don't receive treatment. According to recent study, it's estimated that 1 in 15 adults will experience depression or have at least one major depressive episode. Recent study says it weakens the body's immune system. According to report published in perspectives on psychological science.

Multiple sclerosis

According to study by Multiple Sclerosis Foundation explained it disrupts the communication between brain. 400,000 multiple sclerosis affected in American population. The exact cause of the disease is unrevealed [4].

Chronic obstructive pulmonary disease (COPD)

It is a 3rd major condition globally.

This lung disease is a major condition worldwide. Shortness of breath affects people's capacity to breathe, women are affected more.

Breast cancer

Most common type of cancer affected mainly in women in united states.

1 in 8 women are affected with breast cancer. In 2013 40, 464 died from this cancer and in 2017 252,000 died from this cancer.

Rheumatoid arthritis

Most common inflammation condition affecting 54 million adults in the united states and 300,000 children have appearance of arthritis, 24 million people are disabled.

Colon cancer

3rd common diagnosed malignancy and it is 4th leading cause of death, expected to increase more than 2.2 million active cases, 1.1 million deaths in upcoming future by 2030.

Recently U.S department of agriculture (USDA) and U.S department of health and human services (HHS.gov) they co-developed a dietary guidelines (2020-2025) for American people.

This guideline is to promote health on what to eat and drink and prevent from chronic conditions. The guidelines suggest plant based diets and less intake of meat and less consumption of low carbohydrate diets [5].

Americans not to include low carbohydrate eating pattern or limiting consumption of carbohydrates: They consume carbohydrates in the forms of fruits, vegetables, grains, and legumes. Only 1 in 10 adults eats enough fruits and vegetables, according to the Centers for Disease Control and Prevention. Research study published in JAMA concluded that in 2012, 52,547

deaths from heart disease because consuming too few fruits and 53,410 deaths to consuming too few vegetables. Consuming too few whole grains was associated with 11,639 deaths from type 2 diabetes. Low- carb diets can also lead to early death. Another study found that participants with lowest intake of carbs had a 32% higher risk of all cause death. The risk of coronary heart disease, cerebrovascular disease, and cancer were increased by 51%, 50% and 35%, respectively according to American Heart Association, The Lancet and the Annals of Internal Medicine have also show low carb diets increase the risk of early death.

Recommend water instead of milk

Milk products are source of saturated fat so recent guidelines recommend people should avoid milk products because it is linked with ischemic heart disease. Even research study also concluded that milk products increase the risk of respiratory infections, cancers, neurological problems and early death. People who have lactose intolerance milk products they cause blotting, diarrhea and gas. United states department of health concluded that 30 million people to 50 million people adults are lactose intolerant, as well as 95% of Asians, 80% Africans, 100% native Americans and 50 to 80% Hispanics.

Warn against consuming red and processed meat

In the year 2015, scientist from different origin did more than 800 epidemiological survey. WHO- International Agency for research on cancer they restricted processed meat. The clinical trial designed meta analysis concluded 50 gram processed meat is equal to 1 hot dog eaten daily and increased the risk of colorectal cancer by 18% [6].

Promoting plant based eating patterns

A plant-based diet, rich in fruits, vegetables, whole grains and legumes, considerable way to carry through good health. These food are full of fiber, vitamins and minerals, cholesterol free, and low in calories and saturated fat. people who eat a plant based diet had lower risk for heart disease, type 2 diabetes, obesity, and other health conditions.

Malaria: causes 435,000 deaths per year in sub- saharan Africa. Children under the age of 5 years have been reported to suffer from the highest fatality rates; scientist have recently discovered that this malaria parasite's populations in Africa and southeast Asia have been growing resistant to a currently available antimalarial drug. Sulfadoxine- pyrimethamine (SP) is used as a first-line treatment to prevent malaria among vulnerable groups. In fact, the Sulfadoxinepyrimethamine combination is at best antimalarial drug treatment approved by the World Health Organization for preventative treatment in pregnant women and children. Recent research published in PLOS Genetics, concluded that how resistance to this key preventative drug is not only caused by mutations in the P.falciparum parasite genes known as pfdhfr and pfdhps.

Step 2: Web based Survey

Which describes the highlights focused on all the medical information such as: Country Drug Regulatory, COVID-19 latest

research, ongoing clinical trials, Covid19 cases, Clinical case Study, Health Organisations. It also includes Current treatment, Diagnostics, Ayurvedic medicines, Medical Database, Healthcare Technology, Covid19 Vaccine Tracker, Latest research Quiz which may help healthcare professionals get to know about recent ongoing research and may help communities to get right information in one scrolling [7].

Observation and Results

From the above **Figures 1 and 2** survey analysis we concluded that:

- 9 people only know about COVID- 19 symptoms among the 58 participants enrolled in the survey.
- 35 people know about COVID-19 symptoms among 46 participants enrolled in the survey. This may conclude that it needs awareness among the people to get right information on right time.
- 58 % people know the most beneficial diet for heart health that was keto diet among 100 participants enrolled in the survey.
- 30 people know the commonly prescribed drug (statin) that can reduce cholesterol among the 76 participants enrolled in the survey. From this we can conclude that

doctors and pharmacist were people gave the right answer.

- 42% people know about what is pharmacovigilance (Drug Safety) among the 72 participants enrolled in the study from this we can conclude that only doctors know about this field and we can spread awareness about “Pharmacovigilance” in upcoming future. People might report all the Adverse Drug Reaction happens to them in to a centre this might help to reduce the adverse drug event and we get safe and effective drug.
- 49 people know about the Moderna’s COVID-19 vaccine fridge temperature among the 110 participants enrolled in the survey from this we conclude that people are exploring the recent update on the vaccine and exploring the information indepth.

From **Table 1** and the above patient Data we concluded that among 500 enrolled in the survey, Volunteers were boys and girls 70% younger generation group (Age group 21-35), Others were in (40-70) age group, Foreign and Indians. From this patient data we got to know that Thyroid is severe case in every 1 in 40 women according to above data we got and in the recent study year 2020 12% of the U.S Population will develop thyroid condition during a life time according to American Thyroid Association (ATA). So according to analysis of this medical condition data we concluded that Hypothyroid is the major leading cause in many womens [8].

Representation: Prevalence of Chronic health conditions

- In the year 2017 to 2018 75 million people suffer from chronic conditions according to recent world’s largest longitudinal aging study in india.
- While 27% of elderly have pre existing health conditions , around 40% have one or another disability and 20% have mental health problems.
- Recently WHO has set a target for global elimination of trans fats by 2023. Because according to World Health Organization (WHO), each year around 5.4 lakh deaths take place due to intake of industrially produced trans fatty acids. So, this is the first step of Food Safety and Standards Authority of India (FSSAI) towards fulfilment of the commitment made in 2018 to reduce trans-fats in edible oils and foods. So, in this recent update we can overcome Health Problems related to Diabetes, Heart problems we can reduce [9].

This or That Survey

From the above 6 (b) to (j): we did survey of This or That in this related to Pandemic Situation.

- Survey of participants eating vegetarian or Non vegetarian from this survey we got result of 37% participant were preferred eating vegetarian food and 63% participants were preferred eating Non vegetarian food. So from this we concluded that people are more attracted towards protein food rather than vitamins and minerals.

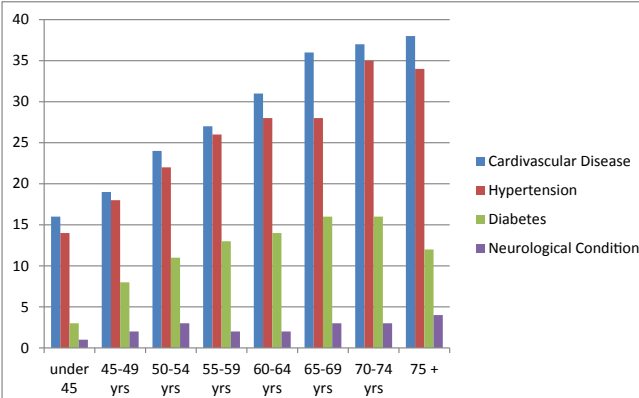


Figure 1 Prevalence of diseases among the elderly age 60 and above.

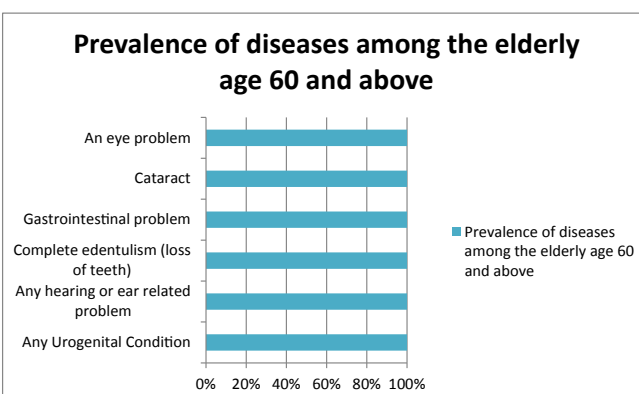


Figure 2 Prevalence of chronic health conditions.

Table 1 List of Patients with Medical conditions.

Sr. No	Name of the Patient	Profession	Age	Gender	Medical Condition	Medication they are taking
1	Jayshri Kaulwar	Housewife	43	F	Hypothyroid	Thyrox 62.5 Mcg
2	Sameer Dahale	Bioinformatics Scientist	25	M	Hypothyroid	Thyronin 100 mg
3	Dr. Lama Malik	Dentist Doctor	24	M	Hyperthyroid	She is not taking any medication
4	Ana Carolina Ferraris	Clinical Research Associate, she is a Pharmacist.	26	F	Hyperthyroid	Previous years she was taking Thiamazole medication (now she left taking this medication).
5	Rita Arora	Scientist	27	F	Hyperthyroid	Ayurvedic Medicine: Ayush (Siddha) medicine KarisalaiKarpam Siddhatti Oil (Capsule)
6	Dr. Nidhi Ranka	Dentist	23	F	Hypothyroid	She was taking Thyronorm Capsules for years (now she has left taking).
7	Eliyama Chacko	Housewife	57	F	Blood Pressure, Diabetes (Type 2)	Metformin, Sulfonylureas, Meglitinides, Thiazolidinedione, Insulin
8	Michel George	Housewife	60	F	Backache, Gastritis, Cervical Spondylosis	Non steroidal Anti- inflammatory drugs: Naproxen, ibuprofen Corticosteroids: Oral Prednisone Muscle relaxants: Cyclobenzaprine Anti-seizure medication: Gabapentin Antidepressants: Doxepin
9	Heleni James	Housewife	67	F	Diabetes (Type 2), Alzheimer	Aricept: donepezil Razadyne: galantamine Memantine
10	Joseph Maliekkal	Housewife	69	M	Blood Pressure, Schizophrenia	Aripazole (Tablet and Injection) Asenapine, Brexiprazole, Chlorpromazine, Fluphenazine, Fluphenazinedecanote (Injection).
11	James John	Staying home	70	M	Blood Pressure, Bipolar Disorder	Mood stabilizers: lithium and valproic acid, Antipsychotics: olanzapine and Aripiprazole, Antidepressant: Fluoxetine Combination of Antipsychotics and Antidepressants: symbax- olanzapine and fluoxetine. Anti-anxiety medications: Benzodiazepines
12	Dr. Poonam Dwarke	Dentist	32	F	Hypothyroid	Eltroxin 100 mcg
13	Komal Ingle	Bioinformatics Student	22	F	Allergic Rhinitis and Bronchitis	Ayurvedic Medicine: AthShwasoOjas
14	Roza Dongare (Her Mother)	Housewife	50	F	Hypothyroid	Thyroxin 50 mcg
15	Aishwar Abhilipsa	IT Profession	28	F	Hypothyroid	Thyroxin 50 mcg
16	Dr. Lakshmi Bandebuche	Dentist	23	F	Hypothyroid	Thyronorm 50 mcg
17	Anoop Kumar Mathur	Artist	60	M	Diabetes (Type 2)	Vogo 0.2 mg Jalra 50 mg Azulix 3 mF
18	Anju Banode	Housewife	50	F	Hypothyroid	Thyronorm 75 mcg
19	Vinita Nagwani	Housewife	45	F	Hypothyroid	Thyrox 62.5 mcg
20	Damyantiben Nagindas Modi	Housewife	70	F	Hypothyroid	Eltroxin 50 mcg
21	Ekta Ramchandani	Clinical Research Co-ordinator	27	F	Hypothyroid	Thyroxin 112 mcg
22	Maitri Modi	IT Profession	28	F	Thalassemia	Kelfer 500 mg
23	Sakshi Mengji	Dentist	22	F	Bradycardia	Currently she is not taking any medication.
24	Jayshri	Housewife	43	F	Sinus Infection	Fluticasone Nasal Spray

- Survey of participants drinking Tea or Coffee from this we got results that 43% participants were preferred drinking Tea and 57% participants were preferred coffee. From this we concluded that people are working in a stressful jobs so they preferred caffeine drinks to stay awake.
- Survey of Doctor and Patient consultant (Telemedicine) online or offline from this we got results that 29% participants were comfortable with offline schedules and 71% participants were comfortable with offline schedules. So from this we concluded that people are no comfortable to share the problems through online consultants and participants are more transparency and comfortable with offline activities.
- Survey of COVID-19 Tablet or COVID-19 vaccines from this survey we got result 23% participants we likely to prefer covid-19 tablets and 77% COVID-19 Vaccines. From this we concluded that people are more likely to prefer vaccines than a tablet. Hence everyone is thinking about their safety about this disease.
- Survey of participants eating fruits or fruit juices from this we got results 64% participants were likely to have fruits and 36% participants were likely to have fruit juices. From this we concluded that participants are more likely to prefer eating fruits in this pandemic they got to know the value of right nutrition and the participants who preferred fruits juices are lazy or busy with schedule, no time for caring there body.
- Survey of Natural Booster or Artificial Boosters in the form of tablets. From this survey we got results 91% participants preferred taking natural booster and 9% participants preferred taking Artificial Boosters. From this we concluded that participants taking natural boosters were knowing the value of nutrition food in this current ongoing pandemic and the participants who preferred taking Artificial Boosters we less likely to have good nutrition hence this participants are just attracted to junk foods than nutrition [10].

Conclusion

- The possibility of healthcare services is to prevent, diagnose and treat disease and answer to reducing death and disability, influencing where different conditions are ranked.
- These new evaluate can be clearly specify where additional investments in services are most urgently needed.
- These new evaluate are another prompt that we need to rapidly set up prevention, diagnosis and treatment of non communicable diseases.
- They emphasize the urgency of exceedingly improving primary healthcare stable and integrated.

- Strong primary health care is clearly the substructure on which everything restes, fight non communicable diseases to managing a global pandemic.
- This study can announce public health policy preference for improving diet and reducing chronic disease burden in United States.
- In this way we can conduct medical survey online, cost effective, time consuming and easy way to interact with people.

Future Scope

From this we can build strong healthcare, which may give proper and right information to communities.

- Time consuming and user friendly.
- Help to learn and Share the thoughts in one platform.
- In this way we can use social media platform in the right and positive way.
- Bringing healthcare heroes together: Doctor's, Pharmacist, Researchers, Life science Graduates, Bioinformatics can make a change in upcoming future where they can communicate each other, share knowledge, develop new ideas, tackle problems and bring positive change in the field of healthcare.
- Spreading awareness to communities.
- In future Thyroid stimulating hormone (TSH) measurement has recently gained a dominant role in thyroid function testing, further ease cost- effective disease screening and introducing new order of subclinical hypothyroidism or hyperthyroidism; along with delivering biochemical treatment targets; TSH test measures how much of this hormone is in a patient's blood. The test finds out whether the thyroid gland is working the way it should.
- In the recent study concluded that air pollution likely led to 29% pregnancy loss in India, Pakistan and Bangladesh according study publised in Lancet Planetary Health. So, from this research we should conclude that environmental factors also affect the health so in future we should focus on how we can reduce pollution effectively.
- The first biggest challenge facing the healthcare industry, is chronic disease. Covid-19 affected and continuous to affect more people with chronic conditions dramatically worse than healthy people. Entire system is based upon: diagnose and prescribe. Smart medicine, medtech, and biotech are transforming medicine-from the way doctors see patients, to how patients are diagnosed, to how continue their education and perform surgeries. With the right focus on privacy, autonomy, and transparency, these technologies could result in greater access to affordable, safe healthcare for all.

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