REPORT

PUBLIC HEALTH PROFESSIONALS

VVV(Triple V)
2/16/2020
Team 11

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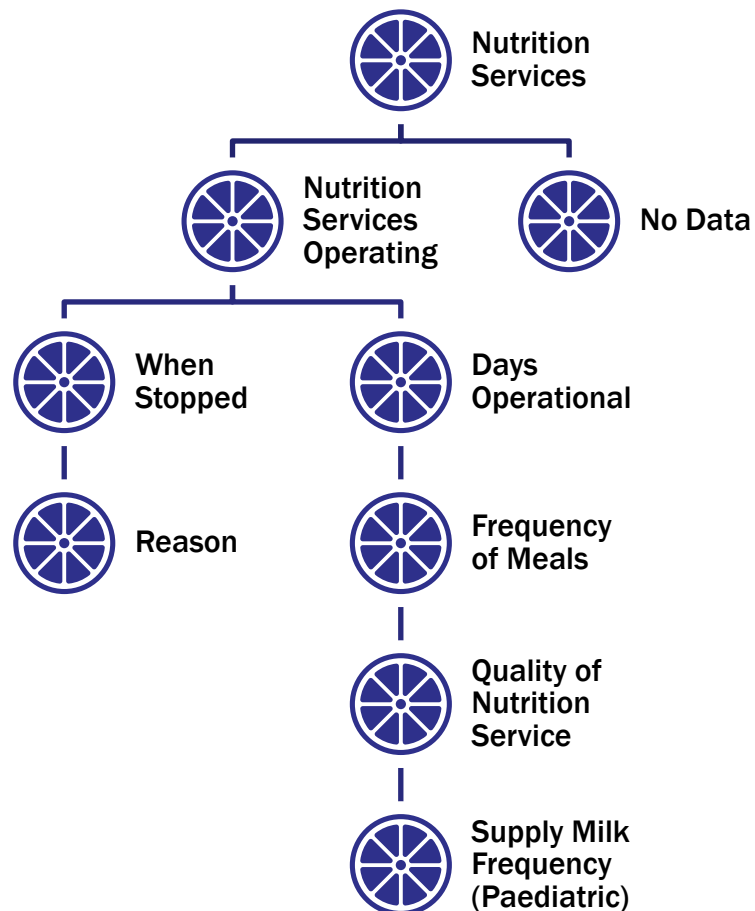**Sun Han Choi**
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INTRODUCTION

Venezuela's economic crisis began from 2013, the country that relied solely on oil wealth. Being, highly reliant on oil, the oil market dipped from 2014 leading to various economical situations that increased crime, food shortages, healthcare systems collapsing and the need for accurate medicines for treatment. From a public healthcare perspective, the Venezuelan government has stopped monitoring and publishing fundamental and key health statistics for evaluating the public health of the population in line with health guidelines, standards and public policies. (C4V) As a result, acute understanding from the data available is needed to create a domain-specific hypotheses, that enables the health-care professionals to identify the cause of disease outbreaks and determine the progression of diseases.

Key Findings

From the historical data available, certain trends have been analyzed.

Nutrition Service

On the form, its quite interesting to notice that as per nutrition availability there are certain questions that populate when there are any nutrition services available for the hospital.

Data Integrity

-        Question 48 of the feedback form mentioning failures in electric light service has been incorrectly categorized as a multiple selection that considers both Yes and No answers.

✔ 517   ✘ 486   ✔|✘ 9

<u>Fix:</u> The question should accept only a single value.

-        Question 53 have ambiguous answers because the question relates to the previous question were there were equipment failures after power outages last week.

📄 573
No Values   '0' 204   'Ninguno' 116

<u>Probable Cause:</u> 1) People who do not know what equipment that caused the failure
                2) People fill up '0' or 'Ninguno' since the option is available to them.

<u>Fix:</u> The field shouldn't be open always. Instead it should depend on the answer to the previous question – number 52. As per the analysis above, the feedback can be left as multiple choice with equipment options and having 'Do not Know' option to select.

Availability Matrix Calculation

Our project focuses on how a hospital is doing when compared to the nation. We analyzed the data for quantities that are thought to be essential to how hospitals operate.
Eg: medicine, surgical supplies, etc..

Our user interfaces askes the medical professional for
- Name of the hospital
- Medicine
- Start_date
- End_date

['Nunca ha existido', 'No hubo' , 'Entre 1 y 2 días', 'Entre 3 y 5 días', 'Todos los días'] to ['x', 0,1,2,3]

$AH1$ = sum(encoded_value)/len(time_window)
$RH1$ = count(numric_value)/len(time_window)
$A\_nations = (AH1*BH1 + AH2*BH2 + ... +AHn*BHn)/(BH1 + BH2 + ... +BHn)$
$R\_nations = (RH1*BH1 + RH2*BH2 + ... +RHn*BHn)/(BH1 + BH2 + ... +BHn)$

For a given hospital in a window of time given by start_date and end_date, we divide the values by 3 if the value in the list is not 'x'. So then you would get ['x',0,⅓,⅔,1]. The data given for us had no values of 'x', which made the calculations so much easier.

Examples from the dataset

Hospital Code: 'AMA000' Medicine: cephalosporins_betalactams Week: 28th to 38th Reliability: 1 Availability: 15% National Reliability Index: 48.5% National Availability Index: 0.18%	Hospital Code: 'AMA000' Medicine: lidocaine Week: 28th to 38th Reliability: 1 Availability: 69% National Reliability Index: 48.5% National Availability Index: 0.8%
Hospital Code: 'FAL000' Medicine: cephalosporins_betalactams Week: 40th to 45th Reliability: 0 Availability: 0% National Reliability Index: 42.63% National Availability Index: 0.23%	Hospital Code: 'FAL000' Medicine: lidocaine Week: 40 to 45th Reliability: 0 Availability: 0% National Reliability Index: 42.6% National Availability Index: 0.99%

Appendix

- No Data has been modified.
- Availability Index has been calculated as per the Glossary.

References

C4V, C. f. (n.d.). *Final - Welcome Kit - 2020.* Retrieved from Google Docs:
https://docs.google.com/document/d/18vLvK-

MKlwlrSPzhWKdoDWamRf1ceBW_RHBOmwWsKIY/edit?mc_cid=25f5 6514dc&mc_eid=bed93dde78