



Health Plans Analysis

Business Intelligence Analyst - DART Team

Ministry of Health

Competition # 102342

Written Assignment

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HealthAnalysis Dashboard

<https://eyrexh.shinyapps.io/healthanalysis/>





Dashboard Introduction - Sidebar Menu

1. Year range from 2005 to 2010
2. 7 plans in BC
 - a. Fair PharmaCare (Plan I)
 - b. Permanent Residents of Licensed Residential Care Facilities (Plan B)
 - c. Recipients of B.C. Income Assistance (Plan C)
 - d. Patients Registered with a Provincial Cystic Fibrosis Clinic (Plan D)
 - e. Children Eligible Through the At Home Program of the Ministry of Children and Family Development (Plan F)
 - f. No-Charge Psychiatric Medication Plan (Plan G)
 - g. Palliative Care Drug Plan (Plan P)
3. 2 different services of MSP
 - a. Medical
 - b. Other Health Practitioners

HealthAnalysis

Select Year:

year_2006_2007

Select PharmaCare Plan

☒ Plan I

☐ Plan B

☒ Plan C

☐ Plan D

☒ Plan F

☐ Plan G

☒ Plan P

Select MSP Service:

☐ Medical

☒ Other Health Practitioners

Dashboard Introduction - Summary Statistics Info

This section displays important statistics for the total amount of **all the PharmaCare plans** in your **chosen year**, including:

- Average Claims per Beneficiary
- Total Beneficiaries in millions
- Total Claims in millions
- Total Amount Paid in millions

Summary Statistics in Year 2005-2006

196.09

Average Claims per Beneficiary



0.849755

Total Beneficiaries (millions)



790.46

Total Amount Paid (millions)



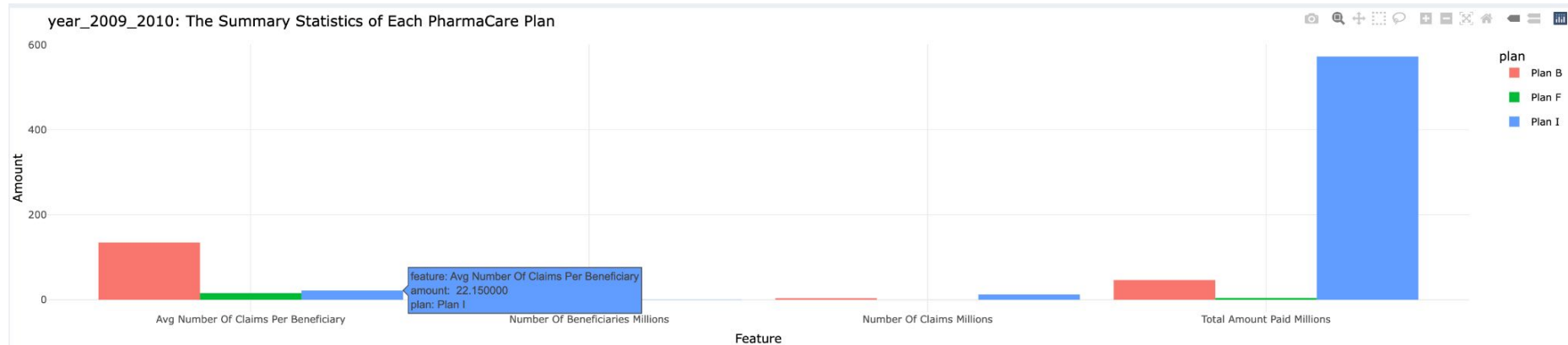
20.198403

Total Claims (millions)



Dashboard Introduction - Bar Chart

This chart visualizes the previously mentioned statistics for the chosen year and multiple selected PharmaCare plans. It allows for easy comparison with the total summary statistics info.

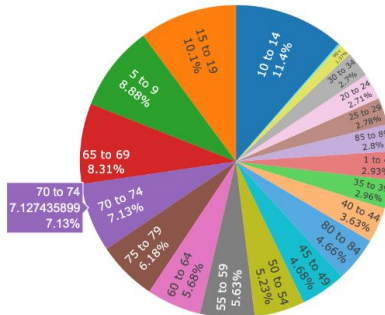


Dashboard Introduction - Pie Chart

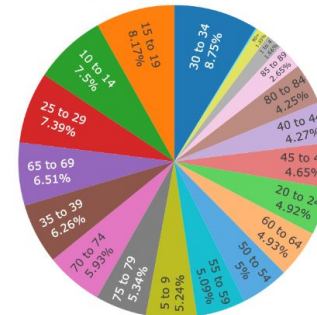
There are two pie charts in this section:

- The first pie chart shows the percentage of MSP patients in different **age** groups for the **chosen year** and **selected service**.
- The second pie chart displays the percentage of MSP expenditures in different **age** groups for the **chosen year** and **selected service**.

year_2007_2008: Percentage of MSP Patients in Each Age Group

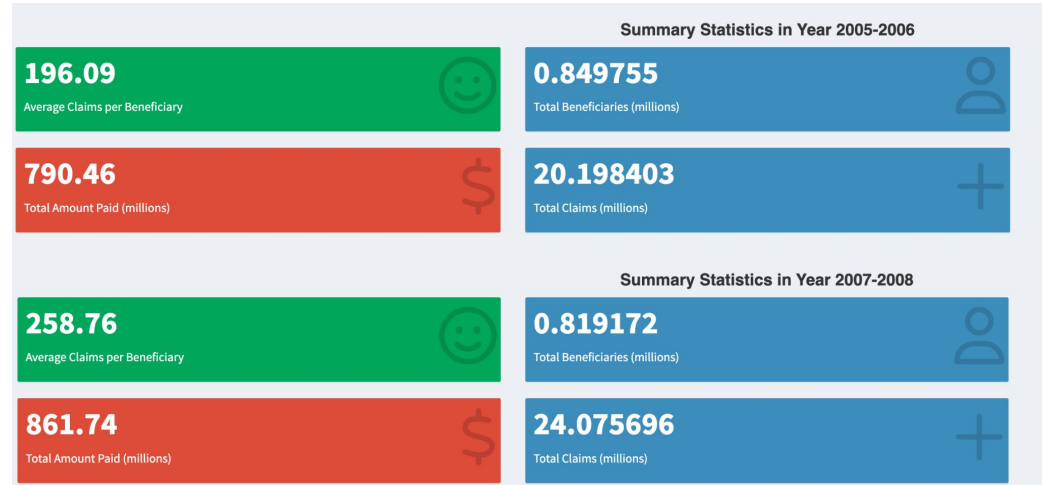


year_2007_2008: Percentage of MSP Expenditures in Each Age Group



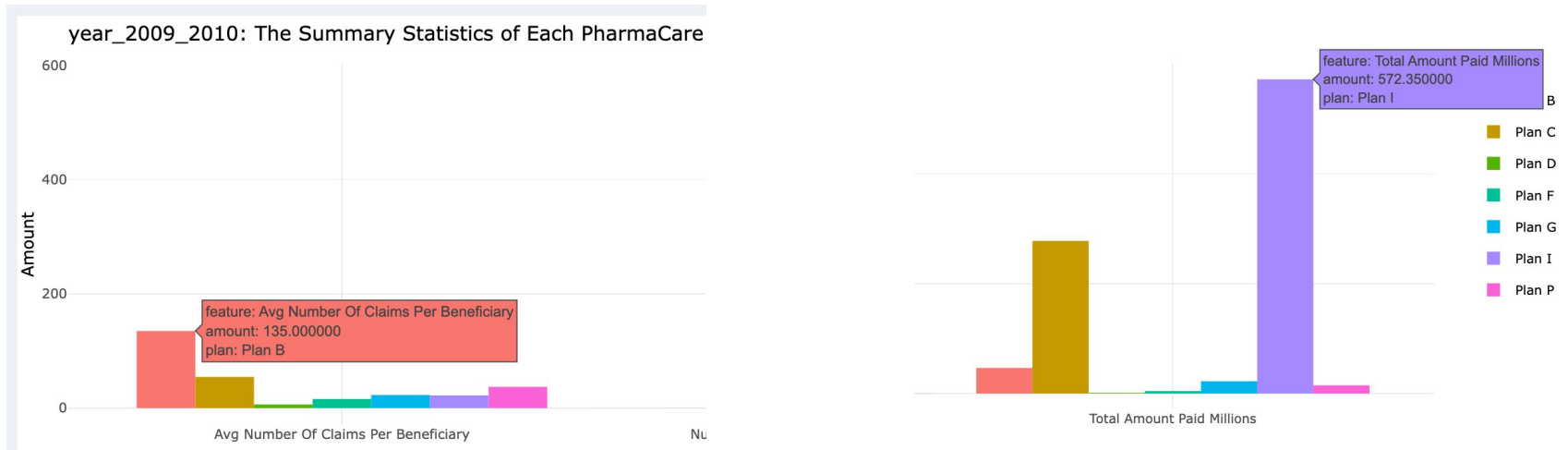
Interesting Findings - Yearly Trends

1. The total amount of “Average Claims per Beneficiary”, “Total Claims” and “Total Amount Paid” increase from 2005 to 2010 yearly of PharmaCare.
2. However the “Total Beneficiaries” slightly decreases during from 2005 to 2008.
3. Same person claim more in these years.



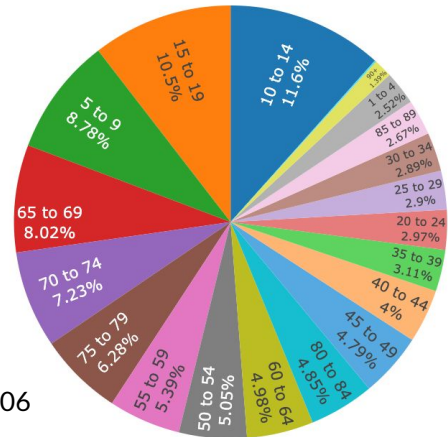
Interesting Findings - Plan Comparison

- In the selected year 2009-2010, Fair PharmaCare (Plan I) is the most common plan to be claimed. This plan also costs the most spendings.
- Permanent Residents of Licensed Residential Care Facilities (Plan B) have the highest average number of claims per beneficiary. People in this plan prefer to claim almost double than the other plans.

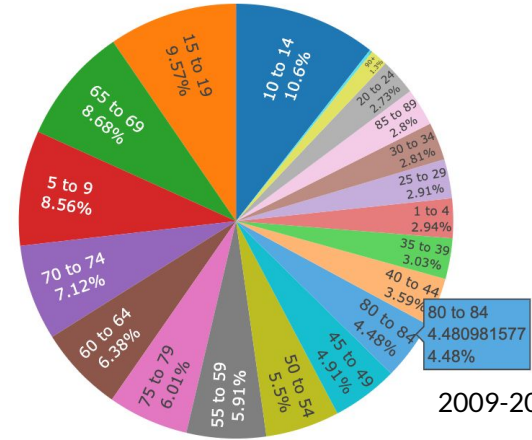


Interesting Findings - Age Group Patients

- In the selected year 2005-2006 and “Medical” MSP service, the Age group “10-14” and the age group “15-19” are the top two groups claims the MSP. After these two teenage groups are the “5-9” kids group and the “65-69” middle-age group.
- In the selected year 2009-2010 and “Medical” MSP service, the Age group “10-14” and the age group “15-19” are still the top two groups claims the MSP. The “65-69” middle-age group is 0.12% more than the “5-9” kids group this year.
- The senior's groups are not at the top in these two years.



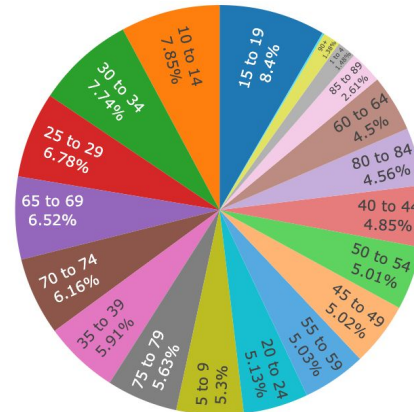
2005-2006



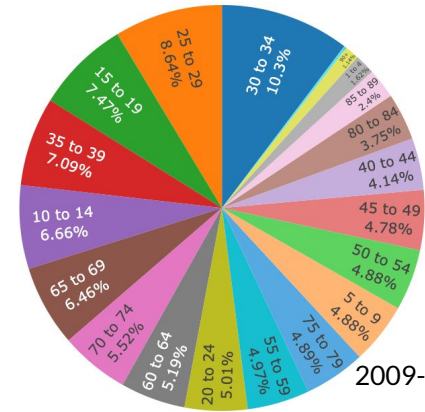
2009-2010

Interesting Findings - Age Group Expenditures

- In the selected year 2005-2006 and “Medical” MSP service, though “10-14” is the age group claimed most, the teenage group “15-19” spends more expenditure of MSP. After these two teenage groups are the “30-34” and “25-29” young adults groups which have very small patients amount but spend a lot.
- In the selected year 2009-2010 and “Medical” MSP service, the age group “30-34” and the age group “25-29” become the groups that spend the most expenditures. The “10-14” teenage group is only the fourth this year.
- The young adult groups spend the most expenditures even though they do not have a lot of patients.



2005-2006



2009-2010