Impact Assessment Report 2023-24

Allergy and Asthma Homoeopathy Specialty Clinic

National AYUSH Mission Kerala

Contents

1. Executive Summary

Chronic respiratory diseases pose a significant health burden globally, with conditions such as asthma and bronchitis contributing to morbidity and mortality. In India, the prevalence of chronic respiratory diseases has shown an increasing trend over the years, highlighting the need for effective healthcare interventions. The Allergy and Asthma Homoeopathy Specialty Clinic was established in Kerala with the aim of providing holistic treatment for respiratory ailments, reducing morbidity and mortality, lowering healthcare expenses, and minimizing absenteeism due to illness.

The project, initiated in 2019 and scaled up to all 14 districts of Kerala, aimed to evaluate its impact on healthcare delivery, beneficiary health status, and economic outcomes. Quantitative methodology was employed, involving two phases of data collection and analysis.

Phase 1 focused on assessing the clinic's coverage and utilization, revealing a substantial increase in outpatient services and beneficiary outreach activities over two years. Phase 2 involved a detailed evaluation of selected units, demonstrating promising health outcomes among beneficiaries, with around 81% reporting symptomatic improvement post-treatment. Significant reductions in healthcare expenses and absenteeism were also observed.

The impact analysis highlighted improved access to healthcare services, positive health outcomes, and cost savings for beneficiaries. Lessons learned underscored the effectiveness and cost-effectiveness of homeopathic interventions, emphasizing the importance of accessibility and standardized care protocols. Recommendations included continued expansion and accessibility, increased operation days, standardization of care protocols, enhanced community outreach and education, utilization of mass media for outreach, integration of telemedicine services, and increased research and evaluation efforts.

In conclusion, the Allergy and Asthma Homoeopathy Specialty Clinic demonstrated a significant positive impact on patient outcomes, healthcare delivery, and economic outcomes. The findings underscored the potential for integrating homeopathy into mainstream healthcare systems to address the evolving healthcare needs of populations, emphasizing evidence-based practices and strategic investments in specialized healthcare services.

2. Introduction

Chronic respiratory diseases are one of the leading non-communicable diseases causing death worldwide, the others being cardiovascular diseases, cancer, and diabetes. The Global Burden of Disease Study 1990-2016 published in Lancet estimated an increase in the prevalence of chronic respiratory disease in India during the years 1990 to 2016, rising from 3.3% to 4.4 %. (1) A study to estimate the prevalence of chronic respiratory diseases from rural areas in Kerala identified that self-reported Asthma is 2.8% and of Chronic Bronchitis is 6.19% and other CRDs is 1.89% (2). Homoeopathy is a treatment of choice among the majority of people in society owing to its modest cost and least side effects on long-term treatment.

Given this scenario, the Allergy and Asthma Homoeopathy Specialty Clinic was established with the following aims and objectives.

- To provide Homoeopathy treatment for Allergy and Asthma & Chronic respiratory ailments through all District Homoeopathy Hospitals in Kerala
- To reduce morbidity and mortality among allergy and asthma and other CRD patients through providing comprehensive homoeopathic treatments.
- To reduce out-of-pocket health expenses for treatment of chronic respiratory ailments.
- To reduce absenteeism in school and workplaces due to allergy, asthma, and other respiratory diseases.
- To reduce family burden and caregiver burden due to chronic respiratory conditions.

Allergy and Asthma Homoeopathy Specialty Clinic Project was implemented in Kerala in 2019 as per the approved State Annual Action Plan of 2018-19. Initially, two centres were established, one at District Homoeo Hospital Thrissur and the other at District Homoeo Hospital Malappuram. Taking into account the project's public acceptance, a proposal was submitted in SAAP 2019-20 to scale up the project into other districts also. This proposal was approved and Allergy and Asthma Homoeopathy Specialty Clinic started functioning in all 14 districts of Kerala.

3. Objectives of the study

1. To evaluate the impact of Allergy and Asthma Homoeopathy Specialty Clinic services on healthcare delivery across the state.
2. To evaluate the impact of Allergy and Asthma Homoeopathy Specialty Clinic by assessing the health status of beneficiaries.
3. To evaluate the economic impact the project has made to its beneficiaries.

4. Methodology

Quantitative methodology was followed to meet all the objectives. There are a total of 14 Allergy and Asthma Homoeopathy Specialty Clinic running in the State of Kerala, one in each district. The study was done in two phases, Phase 1 and 2.

Phase 1 was carried out to meet the objective 1. It consisted of collecting data on number of beneficiaries and number of outreach programs conducted in all 14 units during the past two years. The data were collected from each district by the project coordinators of respective districts.

Phase 2 was carried out simultaneously to meet the objectives 2 and 3. For this, 5 units were selected randomly. The selected units were the Allergy and Asthma Homoeopathy Specialty Clinic of Kasargod, Kannur, Malappuram, Thrissur, and Palakkad districts. Based on the total number of beneficiaries who availed of Allergy and Asthma Homoeopathy Specialty Clinic service from the selected units, a sample size of 384 was estimated. The sample size for each unit was then calculated proportionally. The medical officers of respective units collected the secondary data of each beneficiary by randomly selecting the case records. By analysing the existing case record, a data collection tool was prepared in the form of Google form and provided to the respective medical officers.

The data were then cleaned and statistical analysis were performed using Microsoft Excel and SPSS.

5. Findings

5.1 Phase 1

5.1.1. Coverage and Utilisation of Allergy and Asthma Homoeopathy Specialty Clinic Services

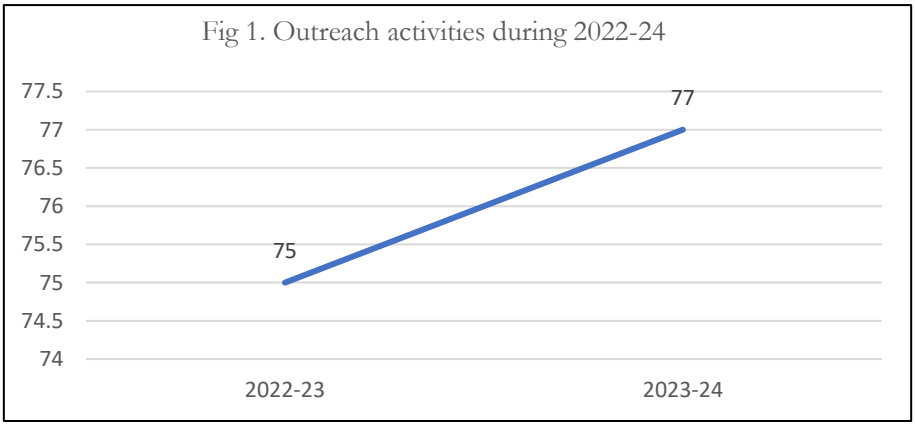
Initially the Allergy and Asthma Homoeopathy Specialty Clinic was implemented in two districts, and then scaled up to other districts. Now the specialty clinic is functioning in all 14 districts. There is an increase in beneficiaries seeking outpatient services over two years rising from 69883 during 2022-23 to 76938 during 2023-24 (Table 1, Fig 3). Despite the number of outreach activities conducted has not much difference during the years 2022-23 and 2023-24 (Fig.1), the number of beneficiaries availed the outreach activities significantly increased from 4694 to 6025 (Table 2, Fig.2)

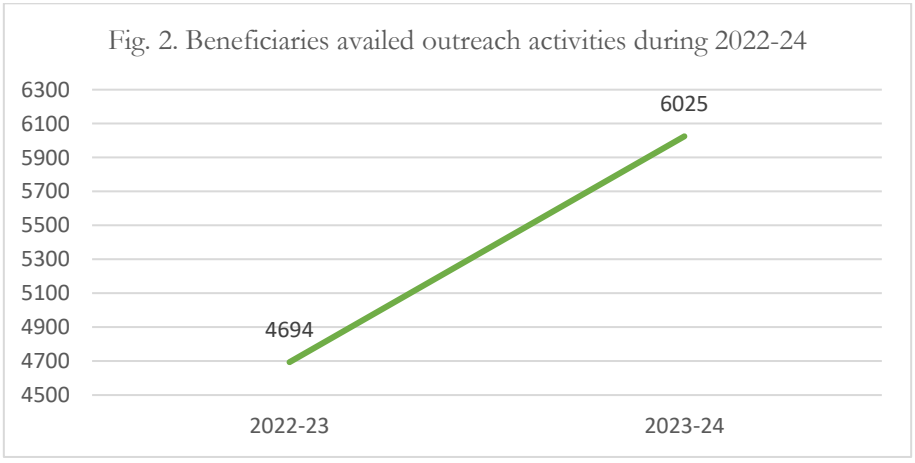
Table 1. Beneficiaries during the year 2022-2024

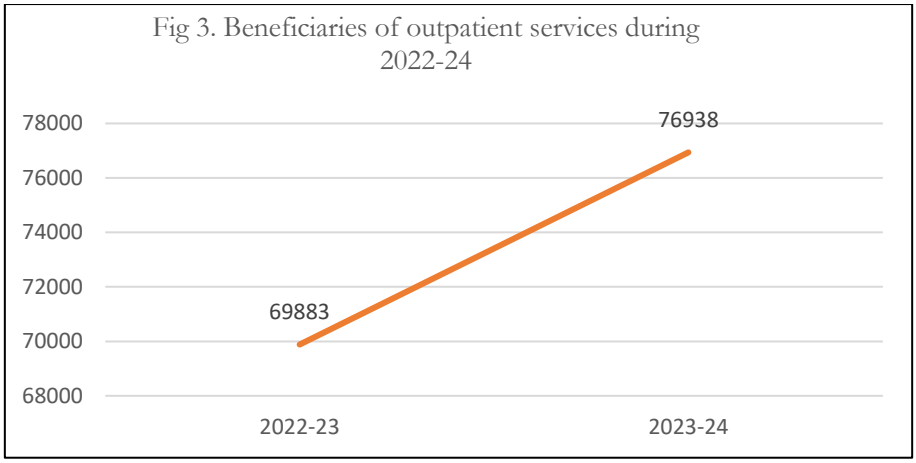
Year	Beneficiaries
2022-23	69883
2023-24	76938

Table 2. Outreach activities during the year 2022-24

Year	No. of outreach activities	Beneficiaries availed outreach activities
2022-23	75	4694
2023-24	77	6025







5.2. Phase 2

5.2.1. Description of Units Selected

The units selected for the study were the Allergy and Asthma Homoeopathy Specialty Clinic of Kasargod, Kannur, Malappuram, Thrissur, and Palakkad districts. The samples selected from each district is described in Table 3. A total of 389 samples were obtained with 38 samples from Kannur unit, 73 from Kasargod, 88 from Malappuram, 79 from Palakkad, and 111 from Thrissur unit.

Table 3. Samples collected from each district.

Units	Samples
Kannur	**38**
Kasargod	**73**
Malappuram	**88**
Palakkad	**79**
Thrissur	**111**
Total	**389**

5.2.2. Sociodemographic details of beneficiaries

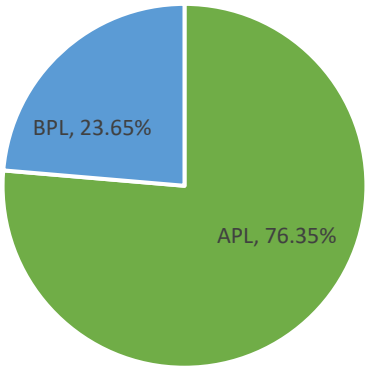
The sociodemographic characteristics of beneficiaries are given in Table 4. More than half of the beneficiaries are females. The majority of beneficiaries were under the age group 1-20. 76.35 % of beneficiaries were above the poverty level and 23.65% were below the poverty level (Fig.4). Most beneficiaries were students (44.21%) and housewives (26.48%).

Table 4. Sociodemographic details of beneficiaries with disease-wise break up.

Sociodemographic Characteristics	**Allergic rhinoconjunctivitis**	**Bronchial Asthma**	**COPD**	**Total**
Age Group				
1-20	104	64	0	168
21-40	58	52	3	113
41-60	31	48	7	86
61-80	0	8	9	17
Gender				
Female	114	109	9	232
Male	79	63	10	152
Socio Economic Status				
APL	162	120	13	295
BPL	31	52	6	89
Occupation*				
Student	108	64	0	172
Housewife	33	61	9	103
Private Job	24	24	5	53
Manual Labourers	7	6	1	14
Govt. employees	6	4	0	10
Healthcare Job	3	4	0	7
Unemployed	2	2	0	4

*Children below 6 years not included in the list

Fig 4. Socioeconomic Status of beneficiaries



5.2.3. Disease distribution among the beneficiaries

Most reported cases were Allergic Rhino conjunctivitis (49.61%), Bronchial Asthma (44.2%) and COPD (4.88%) (Table 4). Other disease conditions included Atopic dermatitis and Nasal Polyp.

Fig 2 shows the distribution of allergic rhinoconjuctivitis, bronchial asthma and COPD across different age groups. Majority of Allergic rhinoconjunctivitis cases were between the age group of 10 to 20 years. In case of Bronchial Asthma, the most reported beneficiaries were between the age group 10 to 20 years and 40 to 50 years. In case of COPD, most reported age group were 65 to 75 years (Fig.5).

Fig 5. Disease-wise break up in different age groups

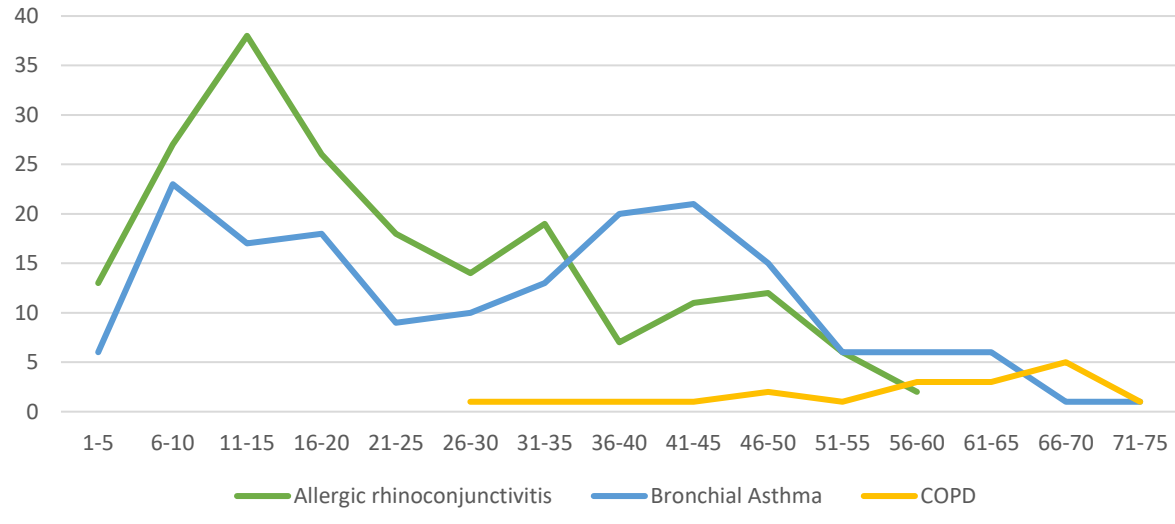
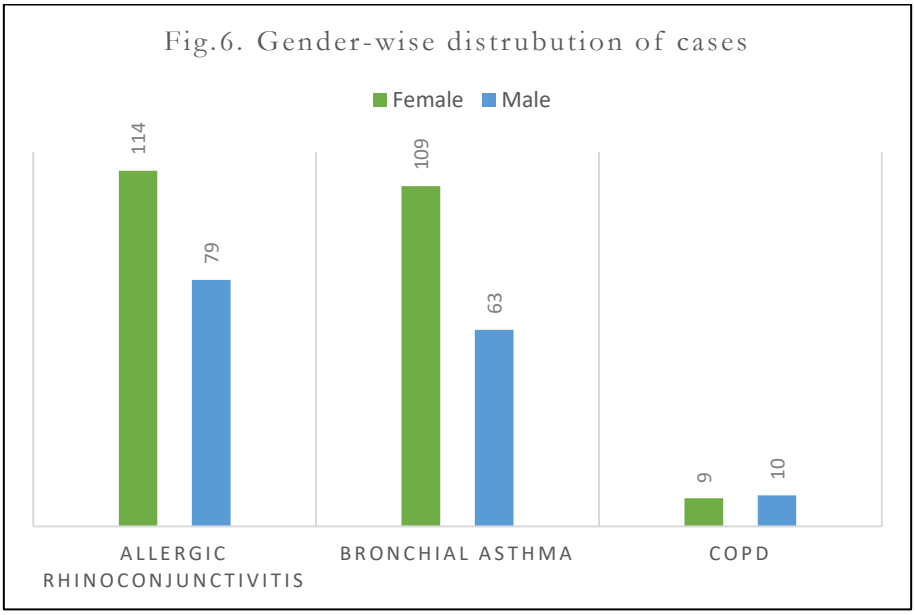


Figure 6 represents the gender-wise distribution of allergic rhinoconjunctivitis, bronchial asthma, and COPD. Among the beneficiaries who reported Allergic rhinoconjunctivitis, 59.07% were females and 40.93% were males. Of the Bronchial Asthma cases, 63.37% were females and 36.63% were males. The COPD cases constituted 47.37% females and 52.63% males.

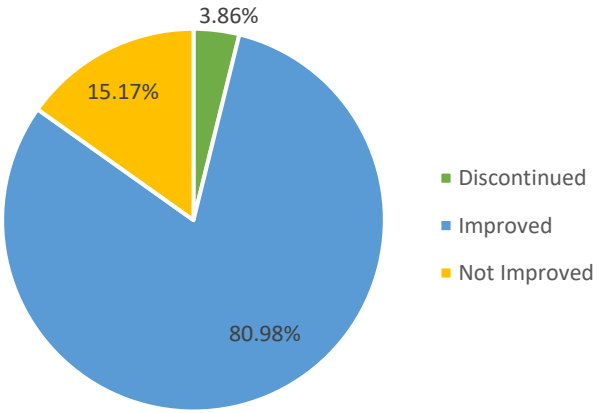
Fig.6. Gender-wise distrubution of cases



5.2.4. Health Status of the beneficiaries before and after treatment

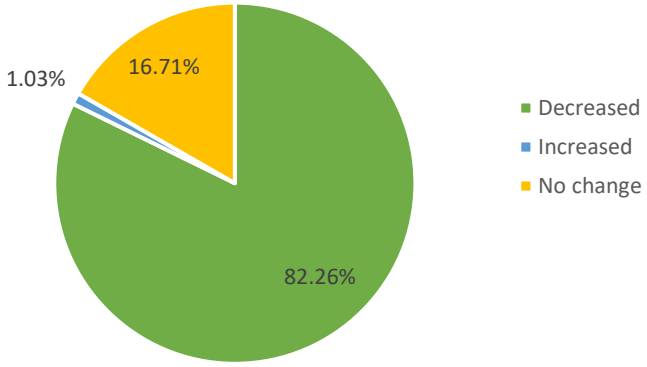
On analysing the follow-up status of beneficiaries, it is found that around 81% of beneficiaries reported improvement in their condition, 15.17% reported as not improved, and 3.86% of cases discontinued the treatment (Fig.7). 20% of discontinued cases reported a symptomatic improvement of their condition.

Fig.7. Status on follow up of beneficiaries



Among the beneficiaries who use inhalers/antihistamines, there observed a significant decrease in the use. 82.26% beneficiaries reported a reduced frequency of inhaler/antihistamine use, 16.71% reported no change and 1.03% beneficiaries reported an increase in frequency (Fig.8).

Fig.8. Frequency of inhaler/antihistamine use



5.2.5. Impact on Job and school absenteeism

Figure 9 shows the status of school absenteeism and Figure 10 shows the status on job absenteeism of beneficiaries availed Allergy and Asthma Homoeopathy Specialty Clinic. 89.14% beneficiaries reported reduction in school absenteeism and 86.87% reported a decrease in job absenteeism.

Fig.9. Status on School absenteeism

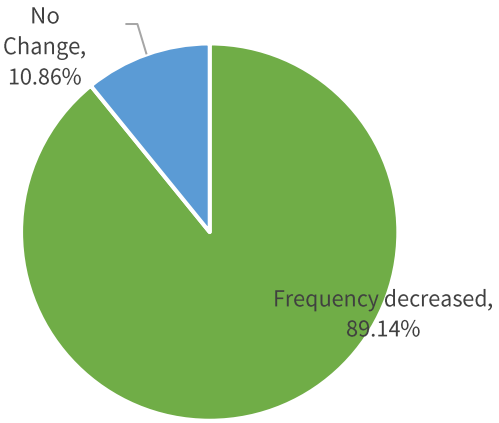
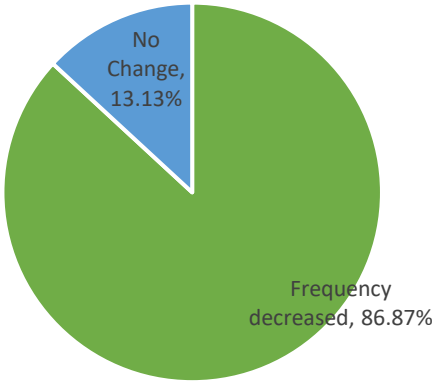


Fig.10. Status on Job absenteeism



5.2.5. Healthcare expense and health status

Table 5. Symptom grade and healthcare expense before and after treatment

	Mean difference	t value	df	p-value
Symptoms grade Before treatment-After treatment	1.89664	23.835	386	<0.001***
Healthcare expense per month before treatment - Healthcare expense per month during treatment	1031.889	30.874	386	<0.001***

The paired t-tests conducted on Allergy and Asthma Homoeopathy Specialty Clinic beneficiaries revealed significant improvements in symptoms and considerable reductions in healthcare expenses. Before treatment, the mean symptom grade was 3.0233 (SD=1.03), which significantly decreased to 1.1266 (SD=1.22) after treatment [$t(386) = 23.835$, $p < 0.001$***], indicating the effectiveness of homeopathic treatment. Similarly, healthcare expenses decreased significantly from a mean of 1477.69 (SD=643.11) before treatment to 445.80 (SD=427.59) after treatment [$t(386) = 30.874$, $p < 0.001$***], demonstrating a substantial reduction in costs (Table 5). These findings suggest that homeopathic treatment not only improves symptoms but also leads to considerable savings in healthcare expenses for the beneficiaries compared to other treatment modalities.

6. Impact analysis

6.1. Improved Access and Utilization

The expansion of the Allergy and Asthma Homoeopathy Specialty Clinic to all 14 districts resulted in a notable increase in the number of new cases seeking outpatient services over two years. Despite consistent outreach activities, there was a significant rise in beneficiaries availing these services, indicating improved access and utilization of healthcare services.

6.2. Positive Health Outcomes

Analysis of beneficiary data from randomly selected units revealed promising health outcomes. A substantial majority of beneficiaries reported improvement in their health status after treatment, with around 81% experiencing symptomatic relief. This suggests that homeopathic interventions provided at the specialty clinic were effective in managing allergic conditions and respiratory ailments such as allergic rhinoconjunctivitis, bronchial asthma, and COPD.

6.3. Reduction in Healthcare Expenses

The study findings demonstrated significant reductions in healthcare expenses for beneficiaries availing services at the Allergy and Asthma Homoeopathy Specialty Clinic. Homeopathic treatment resulted in considerable cost savings, with a significant decrease in the mean healthcare expenses incurred by beneficiaries after treatment. This highlights the economic benefits of homeopathic interventions in managing allergic and respiratory conditions, offering a cost-effective alternative to conventional treatment modalities.

6.4. Impact on Absenteeism

Beneficiaries reported a notable reduction in both school and job absenteeism following treatment at the specialty clinic. This suggests that improved health outcomes resulting from homeopathic interventions not only enhance the well-being of individuals but also contribute to increased productivity and participation in educational and occupational activities.

7. Lessons Learned

7.1. Effectiveness of Homeopathic Interventions

The study underscores the effectiveness of homeopathic treatment in improving health outcomes and reducing symptoms associated with allergic and respiratory conditions. These findings emphasize the value of homeopathy in healthcare delivery systems for managing the growing burden of allergic diseases and respiratory disorders.

7.2. Importance of Accessibility

The expansion of the specialty clinic to all 14 districts enhanced access to specialized care for individuals with allergic and respiratory ailments. This highlights the importance of decentralizing healthcare services and ensuring equitable access to specialized treatments across diverse geographic areas.

7.3. Cost-Effectiveness of Homeopathy

The study provides evidence of the cost-effectiveness of homeopathic interventions compared to conventional treatments for allergic and respiratory conditions. The substantial reduction in healthcare expenses post-treatment underscores the economic benefits of homeopathy for both individuals and healthcare systems.

8. Recommendations

8.1. Continued Expansion and Accessibility

Given the positive impact observed with the expansion of the Allergy and Asthma Homoeopathy Specialty Clinic to all 14 districts, it is recommended to continue efforts to enhance accessibility and availability of specialized care across diverse geographic areas. Establishing satellite clinics or mobile units to reach underserved populations in remote or rural areas is recommended.

8.2. Increased Operation Days

To ensure that beneficiaries who visit on days other than special OP days receive specialized care, it is recommended that the Special OP functions six days a week. This change will provide continuous access to specialized care, enhancing the importance and accessibility of the Special OP.

8.3. Standardization of Care Protocols

Adherence to standardized care protocols and treatment guidelines for the management of allergic and respiratory conditions within the specialty clinics to ensure consistency and quality of care across all units is recommended. Conducting regular training sessions for healthcare providers, and monitoring adherence to clinical guidelines recommended.

8.4. Integration of Telemedicine Services

Explore the integration of telemedicine services to facilitate remote consultations, follow-up care, and patient monitoring for individuals accessing services from distant locations. Telemedicine platforms can enhance accessibility, improve continuity of care, and mitigate barriers to healthcare access, particularly for individuals residing in remote or underserved areas.

8.5. Community Outreach and Education

More community outreach and education initiatives to raise awareness about the benefits of homeopathic treatment for allergic and respiratory conditions is recommended by engaging local communities through health fairs, seminars, and educational workshops.

8.6. Utilization of Mass Media for Outreach

To further increase the reach of the project, it is recommended to leverage mass media for outreach efforts. Utilizing platforms such as television, radio, newspapers, and social media can help disseminate information about the availability and benefits of homeopathic treatment for allergic and respiratory conditions, thus reaching a broader audience and encouraging more individuals to seek care.

8.7. Research and Evaluation

More research and evaluation efforts are recommended to continuously assess the effectiveness, safety, and cost-effectiveness of homeopathic interventions for allergic and respiratory conditions.

9. Conclusion

The findings of the impact assessment demonstrate the significant positive impact of the Allergy and Asthma Homoeopathy Specialty Clinic on patient outcomes, healthcare delivery, and economic outcomes. The expansion of the clinic to all 14 districts facilitated increased access to specialized care, resulting in improved health outcomes and cost savings for beneficiaries. These results underscore the effectiveness and cost-effectiveness of homeopathic interventions in managing allergic and respiratory conditions, highlighting the potential for integrating homeopathy into mainstream healthcare systems to address the evolving healthcare needs of populations. Overall, the study emphasizes the importance of evidence-based practices and strategic investments in specialized healthcare services to achieve better health outcomes and improve the overall quality of life for individuals with allergic and respiratory ailments.

10. References

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