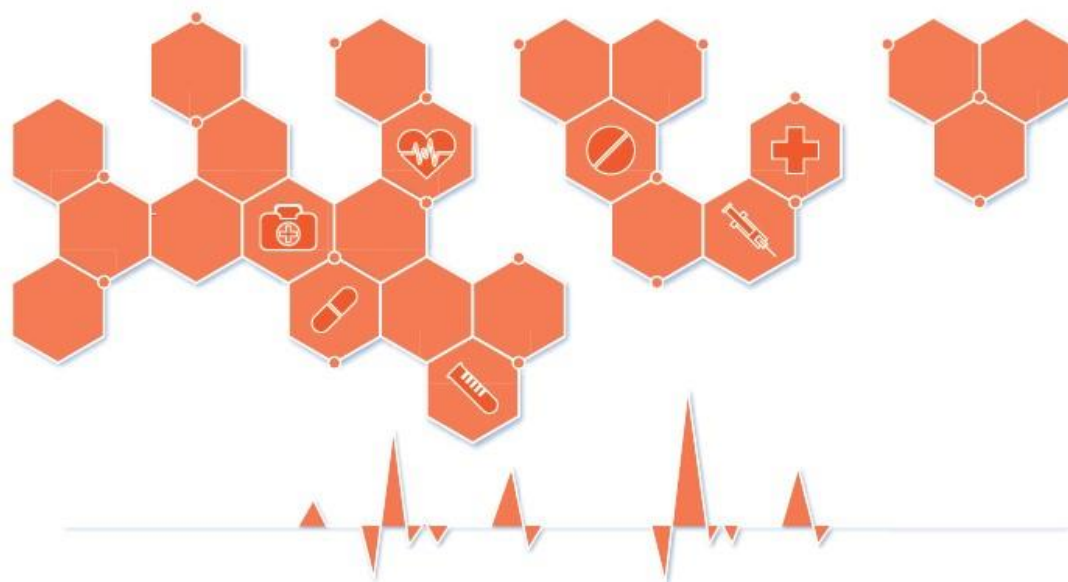


Cataract Management under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY)

**Authors: Parul Naib, Dr Rahul Nigam, Kanishak
Gautam, Harshita Goel**



Disclaimer:

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Acknowledgements:

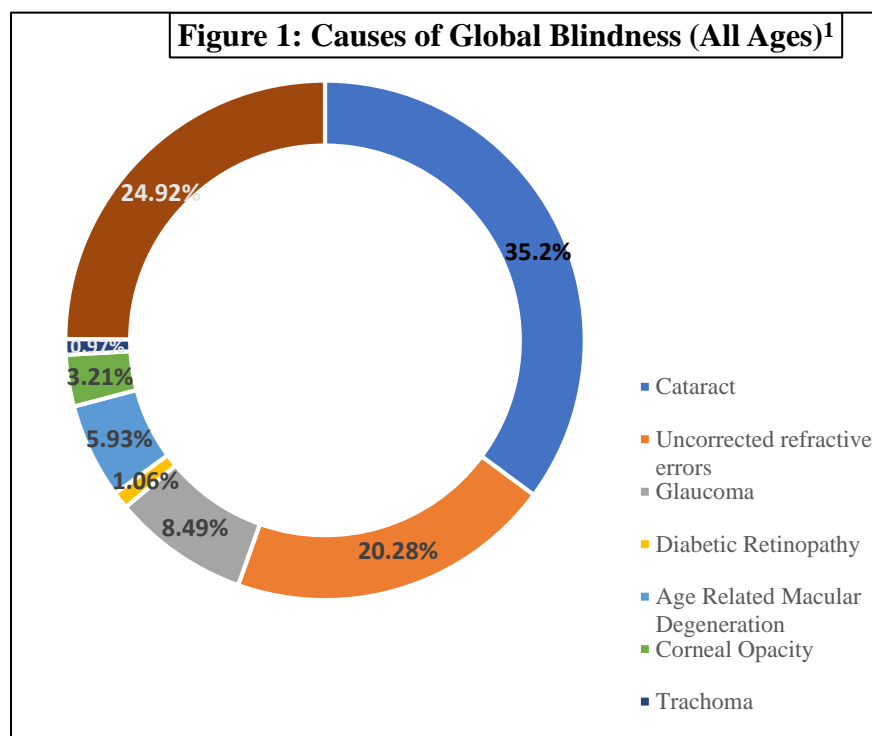
We acknowledge with gratitude the contribution and support provided by all NHA colleagues, especially the Analytics team (Laksh Pahuja and Tanisha Duggal) for providing the required package related data from PM-JAY data warehouse, the Medical Team (Dr Sudha Chandrashekhar and Dr Ankita Chobisa) for providing medical inputs, and the World Bank Team (Sheena Chhabra, Owen Smith, Di Dong and Ajay Tandon) for providing timely feedback. Special thanks to CEO and Deputy CEO at NHA for their overall strategic guidance and facilitating the necessary approvals.

Abstract

Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), is aimed at providing quality secondary and tertiary care to the poor and vulnerable. An important indicator of the scheme's effectiveness relates to the utilisation of cataract treatment and its impact on blindness that can be prevented with timely surgical interventions. The present paper is an attempt to understand key trends with respect to cataract packages utilization by the states and the role of public and private hospitals in providing cataract care.

Keywords: Cataract, India, AB – PMJAY

Introduction



Globally, cataract is known to be the single most important cause of blindness, and contributed as much as 35% of all blindness in 2015.¹ In order to eliminate avoidable blindness caused by cataract and other such ailments, the World Health Organization (WHO) and the International Agency for the Prevention of Blindness launched the 'Vision 2020: The Right to Sight' in 1999 as a collaborative global initiative with the aim of eliminating avoidable blindness by the year 2020. The goal of the initiative was to integrate a sustainable, comprehensive, high-quality, and equitable eye

care model into a strengthened national health-care system.² Vision 2020 envisaged the need for establishing primary eye care units named vision centres for every 50,000 population in the country by the year 2020.

The World Health Organization further endorsed a Global Action Plan (GAP) for Universal Eye Health in 2013 with the target to reduce the prevalence of avoidable blindness and visual impairment by 25% from the baseline of 2010, with cataract as the priority.³ The GAP adopted certain quantifiable measures for cataract surgical service delivery, of which the Cataract Surgical Rate (CSR), defined as the number of cataract surgeries performed per year per one million population, is a vital indicator.

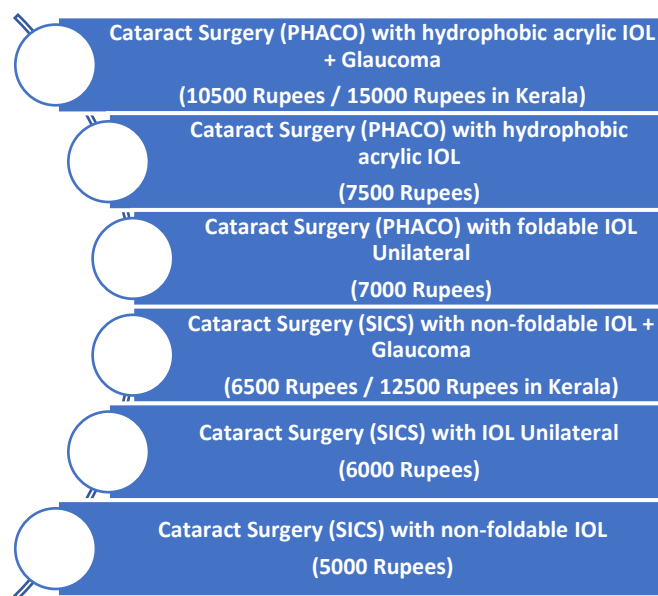
In 2015, cataract was the leading cause of blindness in India contributing as much as 62.6% to the bilaterally blind. The Central Government had launched the National Programme for Control of Blindness (NPCB) in the year 1976, with the goal to reduce the prevalence of blindness from 1.4% to 0.3%. The coordinated national efforts were supplemented by a World Bank-assisted cataract blindness control project which was launched in seven states of India in 1994.⁴ As a result, the Cataract surgical output increased from around 1.2 million cataract surgeries per year in the 1980s, to 3.9 million per year by 2003.³

According to Global Action Plan indicators data, India achieved a Cataract Surgical Rate of 4,830 in 2014. While it is an improvement from previous decades, it is still markedly less than the estimated CSR of 8,000 – 8,700 needed to eliminate blindness due to cataract in India. It is also of concern that several states (Jammu and Kashmir, Jharkhand, Bihar, North-eastern states, Odisha, Chhattisgarh, West Bengal, and Karnataka) are lagging in implementing the targets set by the NPCB despite proactive support by the government and the nongovernmental organizations.²

Therefore, for India to achieve the CSR necessary to eliminate preventive blindness, there is a need to increase the utilization of cataract surgeries and promote better awareness among the public. The largest fully government-funded health insurance scheme in the world, Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB- PMJAY) has a vital role to increase the availability of quality surgery services for treating cataract in India.

Cataract Packages under AB – PMJAY

Figure 2: Cataract Management Packages under PM-JAY

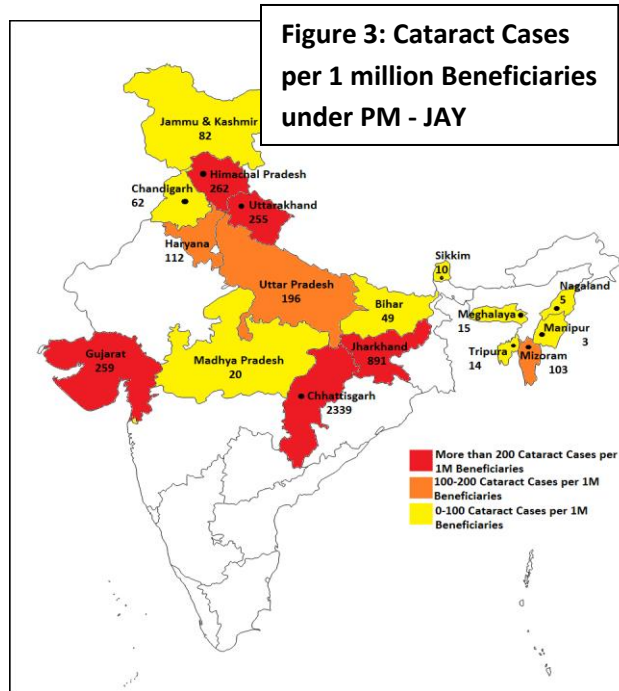


Presently, AB – PMJAY covers 6 packages for Cataract Care varying by the technique used to remove the cataract and severity of the condition. The two most widely offered packages for cataract are Phacoemulsification (PHACO) and Small Incision Cataract Surgery (SICS). PHACO involves the use of a high frequency ultrasound probe to fragment the lens and then remove the lens fragments from the eye. In contrast, SICS relies on the use of surgical instruments to remove the lens from the eye through a small incision. Evidence suggests that the clinical effectiveness of both SICS and PHACO emulsification are comparable, however PHACO is perceived as more effective and efficient by both providers as well as consumers given that it is minimally

invasive. Moreover, most private eye hospitals have the requisite PHACO technology in place making it more efficient for them to do PHACO surgeries only.

There are three other packages that use the Phacoemulsification technique. The least expensive package using this technique is the Cataract Surgery with foldable IOL Unilateral Package with the price of 7,000 Rupees. The costliest package in this category is the Cataract Surgery with hydrophobic acrylic IOL with Glaucoma Package with price of 10,500 Rupees in all states except Kerala where it is priced at 15,000 Rupees.

Similarly, there are three packages that use the Small Incision Cataract Surgery (SICS) technique. The least expensive package in this category is the Cataract Surgery with non-foldable IOL package with the price of INR 5,000 Rupees. The most expensive package using the SICS technique is the Cataract Surgery with non-foldable IOL with Glaucoma Package with the price of 6,500 Rupees in all states except Kerala where it is priced at 12,500 Rupees.



Methodology and Data

The present paper utilizes claim pre-authorisations for cataract treatment under AB – PMJAY for the time period of January to May 2019 for the states of Bihar, Chandigarh, Chhattisgarh, Dadra & Nagar Haveli, Daman & Diu, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Uttar Pradesh, and Uttarakhand. States such as Maharashtra and Tamil Nadu were excluded since they do not cover cataract under PM-JAY.

Results and Findings

A thorough analysis of data revealed certain key trends and information that are crucial to effective implementation of the scheme.

State-Wise Overview

For the time period under study, there were 9.6 Lakh pre-authorisations raised in the states for which data were analysed. Out of these 99,726 (10%) were for Cataract Treatment either through PHACO or SICS technique. However, the utilisation patterns vary across states. For instance, in Jharkhand and Chhattisgarh, cataract cases accounted for more than 10% of total pre-auths while in Haryana, MP and Himachal Pradesh the same only constituted 3% of total pre-auths.

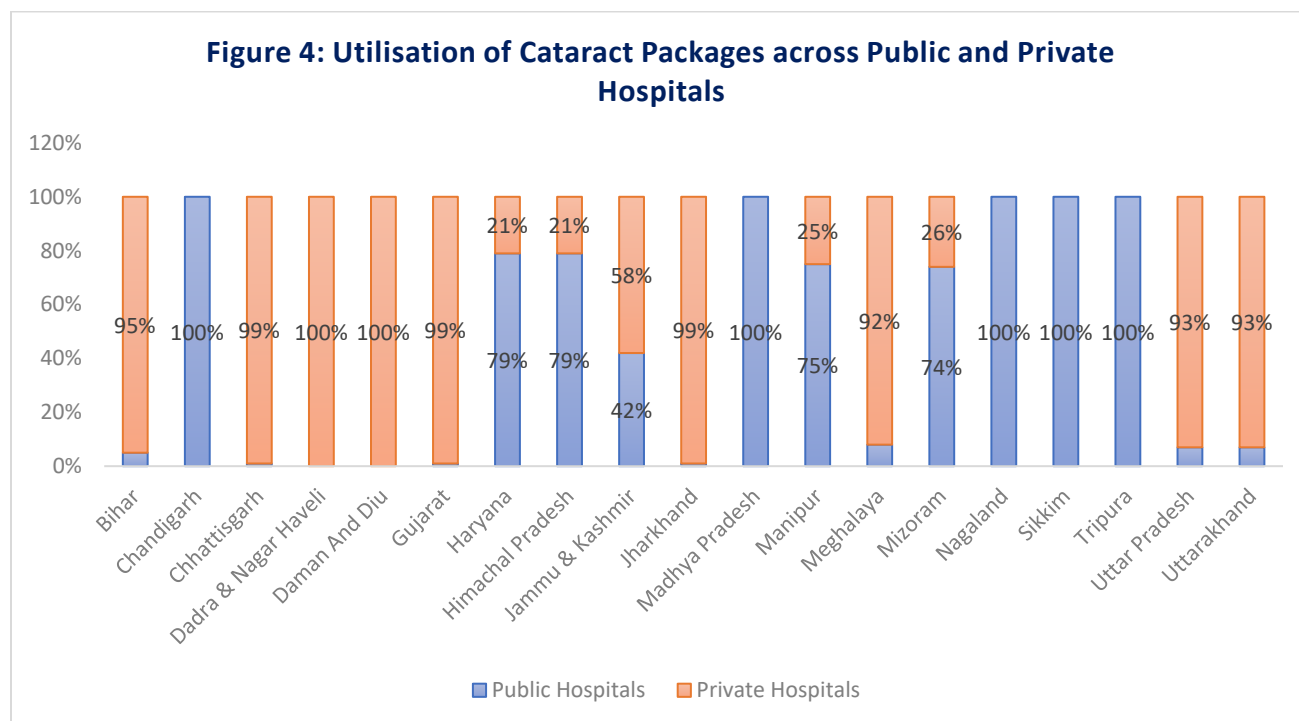
State	Cataract Cases	Total Cases	Percentage of Cataract Cases
Bihar	2660	43196	6%
Chandigarh	22	727	3%
Chhattisgarh	48484	365432	13%
Dadra & Nagar Haveli	83	10485	1%
Daman & Diu	5	4177	0%
Gujarat	5816	58072	10%
Haryana	869	28826	3%
Himachal Pradesh	630	25819	2%
Jammu & Kashmir	250	16904	1%
Jharkhand	25381	156515	16%
Madhya Pradesh	1211	72927	2%
Manipur	4	2221	0%
Meghalaya	65	8802	1%

Mizoram	100	10120	1%
Nagaland	6	653	1%
Sikkim	2	93	2%
Tripura	34	11999	0%
Uttar Pradesh	11596	98385	12%
Uttarakhand	2508	50405	5%
Total	99726	965758	10%

Table 1: Comparison of Cataract Utilisation to Overall Utilisation

Utilization by Type of Hospitals

The PM-JAY data also reveals significant disparities in the share of public and private hospitals claiming for cataract treatment packages across states. In the top 3 states raising pre-authorisations for cataract, a significant proportion of the claims were from private hospitals. For eg. In Chhattisgarh and Jharkhand, 99% of the total cataract claims were raised from private hospitals. Similarly, in Uttar Pradesh, 93% of the total cataract claims were raised in private hospitals.



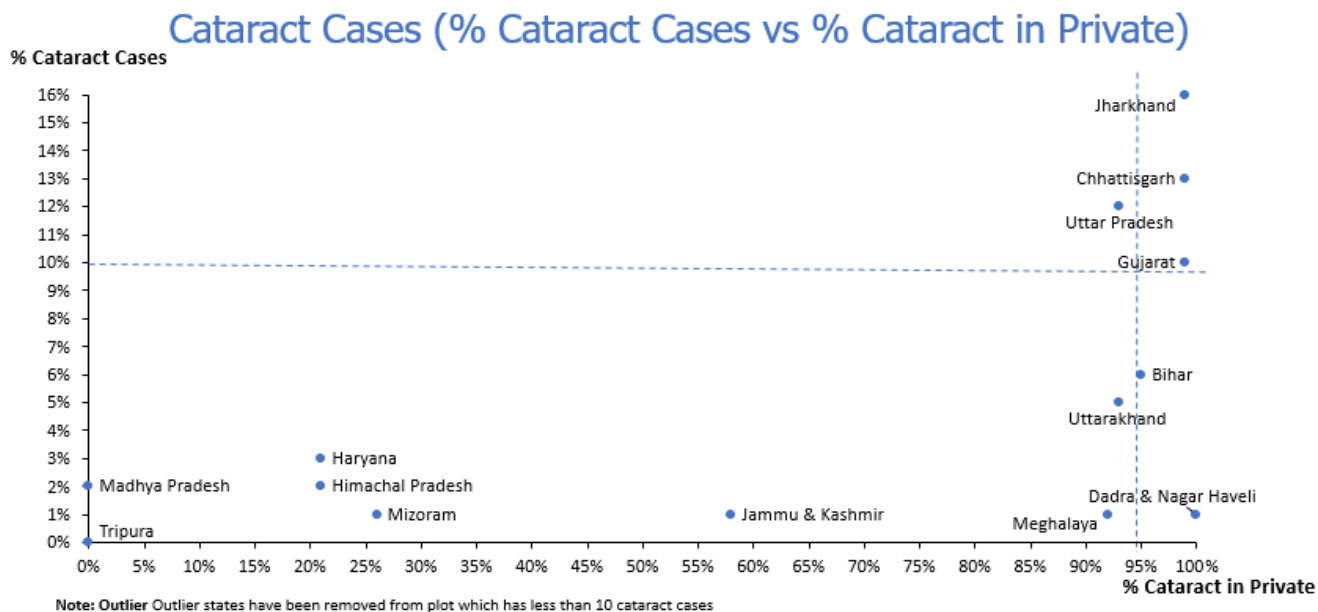


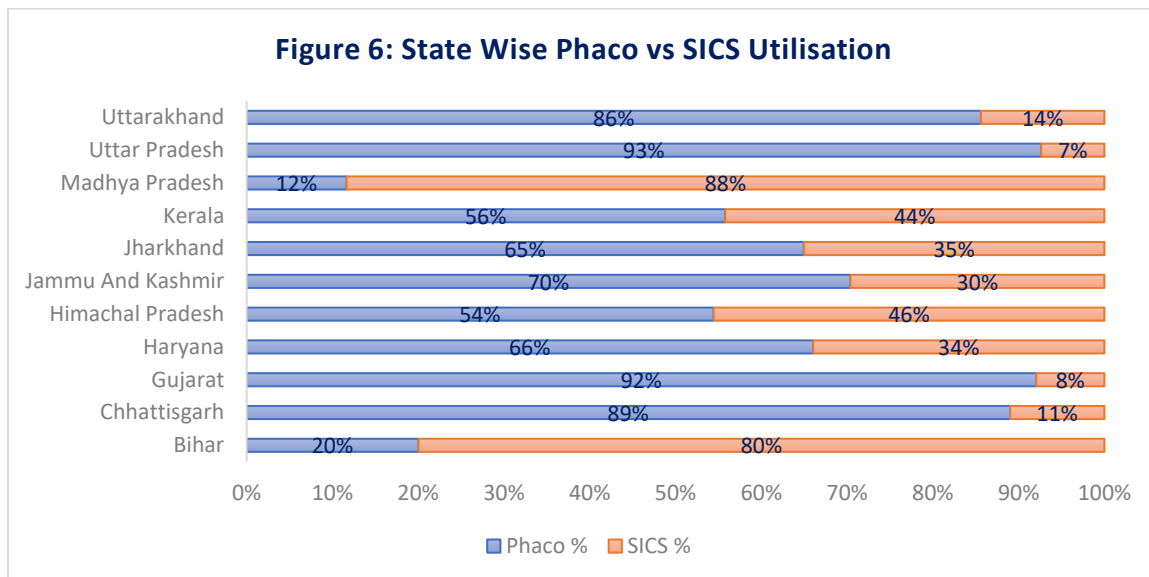
Figure 5: Effect of reservation of Cataract packages for public hospitals on utilisation

Figure 5 triangulates the data from Table 1 and Figure 4. It appears that in states with high utilisation for cataract packages such as Chhattisgarh and Jharkhand, this care is provided primarily by private hospitals while in states where cataract care has been reserved in public hospitals such as Haryana and MP or have few private eye care hospitals such as North Eastern states have low utilisation of cataract care. This trend may also be reflective that public hospitals may be performing the surgery but covering this under NPCB and not PM-JAY.

The launch of PM-JAY has also been an impetus to opening of smaller ophthalmology clinics especially in interior areas given the expansion in demand. This suggests the scheme has attracted more suppliers to enter the market, which offers more options for beneficiaries to access cataract care. More on-ground audits are needed to ensure the medical necessity and quality of care being offered.

PHACO vs SICS Utilization in Public vs Private Hospitals:

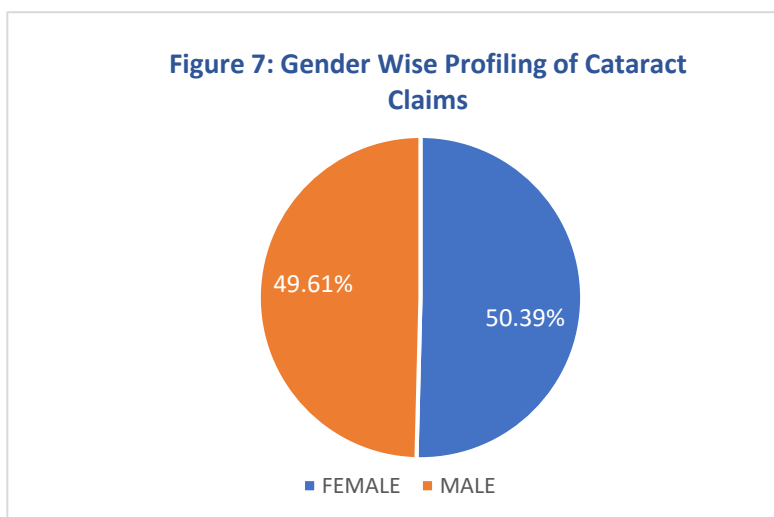
Another key trend is the low utilisation of the SICS technique by the private hospitals and more frequent utilization of the more technologically advanced PHACO technique. For instance, out of the 4,966 cataract treatment claims raised by public hospitals, 77% adopted SICS technique. In contrast, 83% of the 94,760 claims from the private hospitals used the PHACO technique for treating cataract. This may be reflective of the fact that Private hospitals maybe using more sophisticated technology perceived to have efficient and more effective outcomes. Given that the indications for both PHACO and SICS are almost similar, this may also indicate a greater awareness and demand on consumer side for more technology-driven surgeries,



Correlating this data to the share of public and private hospitals in cataract claims across states, we find that states with greater proportion of private hospital claims such as Chhattisgarh also have a greater utilisation of the PHACO technology. Similarly, in Madhya Pradesh where the entirety of cataract claims came from public hospitals, there was a greater utilisation of the SICS technique for treating cataract.

This once again indicates the preference of private hospitals to perform PHACO as compared to SICS technique given their investment in the modern technology and its perceived efficiency and effectiveness.

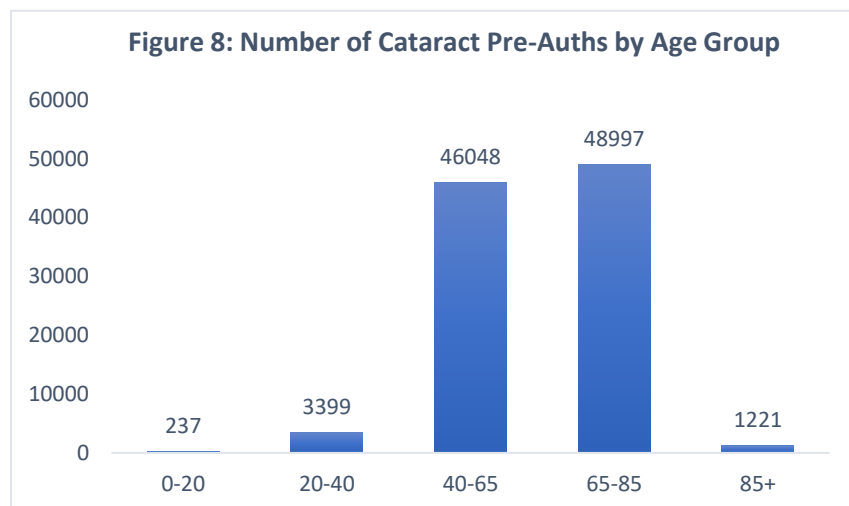
Gender Wise Profiling of Cataract Claims:



The Gender Wise profiling of cataract claims indicates an almost equal distribution between males and females. The trend is similar across almost all states having a considerable volume.

This indicates that both genders are able to access cataract care and PM-JAY is enabling cataract treatment of both males and females alike.

Age-Wise Profiling of Cataract Claims:



India is going through demographic transition. The percentage of population aged >60 years is projected to rise from 8.9% in 2015 to 12.5% in 2030 and 19.4% in 2050.²

Across different age groups, highest numbers of claims for cataract treatment were from the 65-85 years age group, closely followed by the age group of 40-65 years. Cataract as a cause of blindness is more common in these

age groups. According to a study published in the Indian Journal of Ophthalmology, among those aged 50+ years, the quantum of cataract surgery would grow from 3.38 million in 2001 to 7.63 million in 2020. The study also observed that though the prevalence of cataract blindness would decrease, the absolute number of cataract blindness would increase to 8.25 million in 2020 due to a substantial increase in the population above 50 years in India during this period.³

Discussion:

PM-JAY aims to cover high-quality and cost-effective cataract care that is consistent with clinical guidelines in both public and private sector. It is therefore crucial to strengthen the delivery system through ensuring standardised, safe, cost-effective, sustainable, and high-quality cataract surgeries across hospitals. State Health Agencies undertake regular medical audits to investigate cases of poor quality of care or abuse. Some of the audits conducted have revealed that private hospitals may resort to malpractices to perform an excessive number of cataract surgeries, and curbing the same in the future will be crucial to ensure that quality of treatment is not compromised for the sake of increasing profit.

In this context, adoption of the clinical guidelines issued by the All India Ophthalmology society (AIOS) may be considered – these stipulate that the number of eye surgeries by an eye surgeon be limited to 20 cataract surgeries per day. This will help check any abusive practices as well as ensure better quality of care. Another guideline to be considered would be to limit the number of surgeries in accordance with the number of beds available in the facility (or a multiple thereof as cataract is a day-care procedure). Also, given the coverage of cataract surgeries is already covered under NPCB, it may be considered if this could be converged with the national scheme itself.

Also, given that clinical outcomes for both SICS and PHACO are nearly similar with SICS being more cost effective, it might be prudent to look at rationalization of the packages to have a similar rate. This will also take care of any upcoding of packages that may be prevalent.

Another key area to focus would be the quality of implants (Intra Ocular Lens) used during the surgery and having adequate checks in the IT system to ensure that the recommended implants are used. Further, given the high risk of infection post cataract surgery, a separate OT for eye surgery is highly recommended (which is not shared with other depts). Actively encouraging eye hospitals to get NABH accreditation (even at entry level) would also be an important measure to ensure quality care.

Conclusion

In the very first five months after the implementation of AB – PMJAY, around 1 L claims for cataract surgery have been raised, indicating both the extensive prevalence of the condition as well as the previously unmet need for cataract surgeries.

Globally, it is recognized that the cataract burden assumes disproportionately daunting proportion with lower socioeconomic conditions. Urban–rural imbalance in the distribution of ophthalmologists and suboptimal training of residents in cataract surgery (shortage of adequately trained workforce) add to the problems. In this context, AB – PMJAY enables free of cost access to the poor and vulnerable to quality cataract treatment. It remains to be seen if this will result in improving the CSR in the country to help in achieving the estimated CSR required to eliminate preventive blindness. Changes in the Benefit Package Pricing to have similar rates for Phaco and SICS will help in lowering costs and ensure minimum cost impact and reduce any upcoding is prevalent.

Overall, AB – PMJAY seems to have improved access of beneficiaries by augmenting a network of both public and private hospitals, enabling them to avail treatment closer to their home with improved access to both public and private hospitals.

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List of Publications so far

Working Papers:

1. Early Trends in Utilization of Hysterectomy Packages
2. Utilization of Neo-natal Care Packages under PM-JAY: Preliminary Findings

Policy Briefs:

1. Raising of Bar: Analysis of High Value Claims