## Title: Assessing surgical care equity among disadvantaged populations in India under Pradhan Mantri Jan Arogya Yojana

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**Background:** Pradhan Mantri Jan Arogya Yojana (PMJAY), globally the largest publicly-funded health insurance scheme with over 500 million beneficiaries, was formulated to provide financial risk protection against health expenditures among the socioeconomically bottom 40% of Indian population.

Study Objective: To understand equity in surgical care provision for PMJAY beneficiaries.

**Methods:** We reviewed data from 7 policy briefs and 6 working papers by the National Health Authority on early implementation years of PMJAY relevant to surgery under 5 dimensions: public-private health sectors, gender, age, surgical specialty, and geographical distribution.

**Findings:** As of 2021, 12863 of the 27000 hospitals empanelled under PMJAY provide surgical care. Of these, 6737 are private while 5794 are publicly owned. Of the total 1393 packages offered, 1083 are surgical. 26,73,251 (51.5%) submitted claims were for males while 25,17,899 (48.5%) were for females. Most claims for cataract, oncology and cardiac procedures were from 40-65, 45-55, and 51-70 ages, respectively. 12% of the total surgical claims came from general surgery vs. 1% from hysterectomy packages. Cardiovascular thoracic surgical packages are the most expensive costing 3225 crore INR (424 million USD) for 480,000 beneficiaries. As of August 2019, the 115 aspirational districts from 30 states had fewer specialized surgical hospitals than other districts.

**Conclusions:** While the scale-up of overall surgical care is necessary, equity cannot be sidelined. Programs to provide surgical care among people from poor & rural regions are arguably the most important. PMJAY needs to cater to the needs of young populations from economically backward districts.

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Background	Figure 4: Mortality rates (%) in public & private hospitals across specialties		Figure 9: Age distribution of hysterectomy claims under PMJAY Total dama 2100 PM 4 100 PM 4
The lack of affordable healthcare is one of the most significant barriers to achieving	Perioperative mortality at 30 days follow-up	Laparoscopic Cholecystectomy 79.9	40-49 10-29 10-29 10-20 10-14
universal healthcare coverage (UHC) in several low- and middle-income countries	Private Public	Appendicactomy 53.5	
(LMICs) including India. The commonly used indicators for tracking means of health financing include: %	Pediatric Sargery 0.12 0.76	Cataract procedures both by phacoemustion and SICS techniques 51	20 10 10 10 10 10 10 10 10 10 10 10 10 10
population facing catastrophic health expenditure (CHE) defined as the proportion of	Burns Management 4.66 - 5.0 Cardio thoracic and vascular surgery 0.56 - 0.88	Pterygium and Conjunctival autograft 64	
the population with out-of-pocket expenditure (OOPE) greater than 10% of their pre-	Carbo thoradic and vascular surgery 0.36 C 0.68 General Surgery 0.18 C 0.43	Conjunctival tumor excision 68.9	
health shock total incomes and that facing impoverishing health expenditure (IHE)	Plastic and Reconstructive surgery 0.24 GO 0.38 Orthogenics 0.07 (20.035	Total knee replacement 57	41mm 1500
defined as the proportion of the population with OOPE greater than the relevant	Onthopedics 0.07 0.15 Otorhinolaryngalogy 0.00 0.03	Figure contractions of teeth 52	10.3 40-40 Total: 40.2
poverty line (or other relevant international) threshold. Avushman Bharat Pradhan Mantri Jan Arozya Yojana (AB-PMJAY) globally the largest	Ophthalmology 0.01 0 0.02	Herrodialvsis of teels 25.6	100
Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMIAY) globally the largest publicly-funded health insurance scheme with over 500 million beneficiaries, was	Oral and Maxillofacial Procedures 0.60 © 0.62 Polytreuma 0.25 © 0.27	Ingeland Hemioplasty 3.8	
formulated to provide financial risk protection against health expenditures among the	Obstetrics and Gynaecology 0.02 © 0.08	Vitrectorry and Retinal Detachment surgery \$5.3	
socioeconomically bottom 40% of Indian population.	Figure 5: PMJAY empanelled hospitals providing surgical	Vitectory and Hetnal Detachment surgery 85.3 Eracture-bio internal fixation 22.8	Si wati Zi Ke
Here we try to understand equity in surgical care provision under PMJAY.	services	Producting manual baselon 2018	20.27 30 30
A dealers de	General Surgery      Guinetics and Syneology      Grittadedia     Gyldhalealagy     Guinetics and Syneology     Grittadedia     Surger (SMT)     Followne	Source: PMJAY dashboard from September 2018 to April 2019 • Created with Datawrapper	
Methods	Plants and housements any pay been Management Pediants mayory 📕 Surgial Decology Conductional Heature Surgery (CTVI)	Specialties:	
eviewed data from 7 policy briefs and 6 working papers by the National Health		Surgical specialties and packages accounted for 61% and 75% of all claims by	Saute PR-34 Automation devices TTTTS April 2711 - Control with Interengen Known PR-34 Automation Automation September 2711 to April 2714 - Daniel of Conservements Long 11 Marylen Lineau
nority on early implementation years of PMJAY relevant to surgery under 5 dimensions:		volume and monetary value. > Women make up 38% of high-value claims, compared to 48% of all PM-JAY	Geographical Variation: As of August 2019, the 115 aspirational districts from 30 states had fewer specialized surgical
ic-private health sectors, gender, age, surgical specialty, and geographical distribution.	Sergical Garend	women make up 38% of high-value claims, compared to 48% of all PM-JAT claims. The higher male share of high-value claims (62%) was due to men	hospitals than other districts.
	Pelant 2013 Lon	having a higher prevalence of cardiovascular diseases, which resulted in	Figure 11: % Claim volumes at private hospitals for general Figure 12: Ratio of surgery preauthorizatio
Findings	322	greater use of cardiac-surgery packages.	surgery under PMJAY without obstetrics and gynecology
<u>Bit</u> — Private split: a 40 2021, 1268 (149.21 percent) of the 27137 hospitalis empanelled under PMUAY spordes surgical care. Of these, 673 are private while 374 are publicly owned. sport health Breeffis Natage (HHP) 2. Indexed in 12020, PMUR provides 172 ackages of which 611 (19.9%) were surgical, 282 (125%) were medical, and one inspecified parkage. These packages cover 922 provedivers of which 54 are medical 33.9%) and 1052 are surgical (H6N).	A series of the	Figure 8: Package and procedure counts across surgical specialties Previous cost	
ectors	Isour PUV v Isourbe 2015 Fritrun 2011 - Onter eth Terringer	Obstyrics & Gyneecology Neurositypy	And
Public Private	Gender Differences	Dathelmology	
dical 0.015	Women make up 38% of high-value claims, compared to 48% of all PM-JAY	Ophamology	
2578	claims. The higher male share of high-value claims (62%) was due to men having a higher prevalence of cardiovascular diseases, which resulted in great		
939	use of cardiac-surgery packages. Cardiovascular diseases, which resulted in great	Pediatric surpery	Variation Addres
ical 460	the most expensive costing 3225 crore INR (424 million USD) for 480,000	Polytourna	Antimat Bibliotar
	beneficiaries.	Plastic & Reconstructive Surgery	Tend has
(Medical + Surgical) 6.157	Figure 6: % Female pre-authorizations across surgical	Oral and Maxillofacial Surgery	100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100
Surgical claim volumes in public & private Figure 3: Surgical claim volues (USD) in public & private	specialties	Burns Management	
ated hospitals	Obstetrics and Gynaecology 99.4 Surgical Decelogy 59	Unspecified Surgical Package	Route PRGM - NRE have last, 11 to PA, 26 - Grandel with Reservagest Source PRGM - NRE have been up to PA, 29 - Deated with Reservagest
	Surgical Oncology 59 Burns Management 51.2		
	Ophthalmology 515	Source: PMUWY TMS from September, 2019 to November, 2023 Created with Datawrapper	Conclusion
Long Long Long Long Long Long Long Long	Onit and Maxilofacial Procedures 46.9	Age-groups:	
	Otorhinolaryngology 46.8	<ul> <li>Age-groups:</li> <li>High-value packages were claimed mostly by 19-50 (39%), 51-65 (33%),</li> </ul>	While the scale-up of overall surgical care is necessary, equity cannot be sidelined. Programs to surgical care among people from poor & rural regions are arguably the most important. PMIAY n
	Neurosurgery 40.3 Officeredics 32.6	66+ (17%) age-groups. More prevalence of high-value packages is in <5	cater to the needs of young populations from economically backward districts.
544 (144(1093)00	Plastic and Reconstructive surgery 23.6	years and >50 years where disease burden was more.	
	General Surgery 336	Most claims for cataract, oncology and cardiac procedures were from 40-	References
	Cardio-thoracic and vascular surgery 33.5	<ul> <li>65, 45-55, and 51-70 ages, respectively.</li> <li>High-value packages (&gt;30,000 INR) were claimed mostly by 19-50 (39%),</li> </ul>	https://www.pmjay.gov.in/data-dissemination-research
100mLm	Pediatric Surgery 29.1	High-value packages (>30,000 INR) were claimed mostly by 19-50 (39%), 51-65 (33%), 66+ (17%) age-groups. More prevalence of high-value	https://www.pmjay.gov.in/data-dissemination-research National Health Authority, Health Benefit Package - 2.0, Published online June 1, 2021, Access
	Polytrauma 20.8	packages is in <5 years and >50 years where disease burden was more.	March 25, 2022. https://pmjay.gov.in/sites/default/files/2021-06/National-Master-for-
to an INCV fait has been with a factor of the factor of th	Source: PMJAY dashboard from September 2018 to April 2019 • Orested with Dataserapper		Website 0.odf