

An Assessment Of The Implementation Of Pradhan Mantri Ujjwala Yojana In Rural Areas Of India- Challenges And Opportunities

Abstract

The **Pradhan Mantri Ujjwala Yojana** is an initiative by the central government to provide clean cooking fuel in the form of LPG to rural BPL households. It was launched in 2016 to tackle problems arising from conventional cooking methods.

This research paper aspires to assess the implementation of the PMUY scheme in rural areas of India, exploring its impact, the challenges it faces, and the lessons learned to inform future policy interventions. By critically examining the scheme's progress and outcomes, we aim to shed light on the strengths and weaknesses of its implementation, enabling a comprehensive understanding of its effectiveness as a catalyst for social and environmental change.

Introduction

Access to clean cooking is not just a basic necessity to promote good health, but it also plays a pivotal role in preserving the environment. In rural areas of India, people rely on traditional practices for cooking which include solid fuels such as firewood, crop residues, and dung cakes, etc. In this process harmful pollutants like carbon monoxide, sulphur dioxide are released into the air which causes deadly diseases like lung cancer, lower respiratory infection, stroke, etc. Recognizing the urgency to address this critical issue and to promote its tagline "**Swachh Indhan, Behtar Jeevan**", Union Government launched a social Welfare scheme known as " Pradhan Mantri Ujjwala Yojana (PMUY)" on 1st May 2016 under the Leadership of Hon'ble Prime Minister Shri Narendra Modi. This scheme aims to provide Clean cooking fuel and to transform the lives of millions of rural households. By providing free LPG (Liquefied Petroleum Gas) connections to below-poverty line (BPL) households. The PMUY scheme, a flagship project of the Ministry of Petroleum and Natural Gas aimed to lessen the Burden of indoor air pollutants, reduce health risks, empower disadvantaged women, and contribute to a cleaner environment.

An overview of PMUY in rural areas :

1. The need for PMUY in rural areas

According to the 2011 census of India, only 11.4 % of rural households have reported access to clean cooking fuel like Liquefied Petroleum Gas (LPG)¹. The data shows that traditional cooking methods, which predominantly depend on solid fuels such as firewood, crop residues, and cow dung pose several health hazards, especially for women who are primary users. Before the implementation of the PMUY scheme, a substantial number of households in rural and economically disadvantaged areas relied on these polluting cooking methods. Women in particular bore the brunt of these hazardous conditions as they are exposed to this toxic smoke for the majority of time as compared to men. The lack of proper ventilation in traditional kitchens further compounded the problem as it increased the concentration of harmful pollutants like particulate matter, carbon monoxide (CO), nitrogen oxide (NO), and sulphur dioxide (SO₂) in the air. Furthermore, the traditional cooking method costs the environment as its sources are forests. The ongoing deforestation and the combustion of chemical compounds in the air can be lessened with the shift to the modern cooking method i.e. LPG. Therefore, to ease the lives of rural women by empowering them and to protect the environment for a better future, the government came up with the “ Pradhan Mantri Ujjwala Yojana” on 1st May 2016.

2. Objectives of the scheme :

1. To provide clean cooking fuel to impoverished households (BPL card holders) in rural areas.
2. Prevent the negative health effects that traditional cooking has on women and children.
3. To reduce the environmental pollution brought by the burning of fossil fuels which results in severe respiratory diseases.
4. To reach out to rural women, especially those below the poverty line, and empower them.
5. The Pradhan Mantri Ujjwala Yojana 2.0 aimed to provide maximum benefits to the migrants as they faced documentation problems in the previous phase.

3. Features of the scheme:

1. The applicant must be a woman above 18 years of age. She must be a citizen of India.
2. She must be below the poverty line as per 14- point declaration. The applicant must not have an LPG connection.
3. The monthly income of the family must not exceed a certain limit as prescribed by the UT / State government.
4. The scheme was expanded in 2018 to include women from the following categories:

¹[National library of india](#)

- 4.1. ST households
- 4.2. SC households
- 4.3. Pradhan Mantri Awas Yojna (Gramin)
- 4.4. Most Backward Classes
- 4.5. Antyodaya Anna Yojana (AAY)
- 4.6. Tea and ex-tea tribes
- 4.7. Forest dwellers
- 4.8. People residing on Islands and river Islands
- 4.9. SECC Households (AHL TIN)

4. Key Benefits :

1. Free LPG connection is given to the rural households eligible for the scheme with financial assistance of ₹ 1,600 (for a connection of 14.2 kg / ₹ 1150 for 5 kg).
2. The first free LPG refill and the gas stove are provided by public sector Oil Marketing Companies (OMCs) to the beneficiaries. The beneficiaries will be provided with a subsidy of ₹ 200 per 14.2 kg cylinder for up to 12 refills per year as of March 2023.
3. A security deposit of cylinder ₹ 1250 for 14.2 kg / ₹ 800 for 5 kg cylinder.
4. The pressure regulator of ₹150
5. LPG Hose - ₹ 100
6. Domestic Gas Consumer Card – ₹ 25
7. Inspection/ Installation/ demonstration charges –₹ 75

5. Target of the scheme

PMUY: The initial target of the scheme was to provide LPG connections to 5 crore women below the poverty line, subsequently, the target was revised to 8 crore LPG connections. This target was achieved in August 2019, seven months ahead of the target date.

PMUY-2.0: To cover the remaining households under the PMUY scheme, PMUY 2.0 was launched on August 10, 2021. It aimed to provide an additional one crore LPG connections. On January 31st, 2022, the government achieved the target of providing 1 crore LPG connections under PMUY 2.0.

An assessment of the PMUY scheme on rural women's life

In Indian households, especially in rural areas, women are expected to only take care of the household chores and bear children. Call it patriarchy or hegemony, women are expected to be down the line. This is the real scenario of many rural households. The matter is worsened by the fact that many women risk their life due to the usage of fossil fuels while cooking. It's unfortunate to learn that the woman who serves the family risks her life providing meals because of traditional cooking methods.

Recognizing this dreadful situation, the government of India launched the PMUY scheme to provide clean cooking fuel to the women belonging to the economically weaker section. By replacing traditional cooking methods with LPG, this scheme has played a pivotal role in improving the overall well-being of women in rural areas.

1. Health benefits: According to World Health Organization (WHO), exposure to household air pollution emerging from these solid fuels leads to the premature death of approximately 3.2 million people every year with a significant proportion being women and children². WHO confirms that the burning of these fuels releases harmful chemicals and fine particulate matter which causes indoor pollution that leads to noncommunicable diseases including stroke, heart disease, lung cancer, chronic obstructive pulmonary disease(COPD), etc. The usage of clean cooking fuel has a direct impact on women's life and family. Earlier women were prey to harmful chemicals but now they cook in a clean environment. The shift to the LPG has led to a decrease in respiratory ailments, eye problems, and other health issues faced by women earlier.

2. Safety and convenience: Traditional cooking methods often involve open fires, which pose risks of several burns and accidents. With LPG the risk of fire-related accidents is reduced if used carefully. A study found that women decision-makers prefer LPG cylinders over traditional cooking methods as they found it more convenient and safe. It's unfortunate to witness that male decision-makers of rural households prefer traditional methods as they are not affected by that process. The government has taken this step to address these concerns of women and provide them with a helping hand through the LPG initiative.

3. Time and Labour savings: Estimates suggest that Indian rural women spend 374 hours a year collecting firewood. Studies show that by shifting to LPG, women and girls may save up to 1.5 hours a day, allowing them time for education, self-employment, and participation in community activities. Also, Studies from Africa suggest that shifting to cleaner alternatives increases women's labor force participation by up to 9%³.

4. Employment: This scheme has made a huge impact in the region in terms of investment, job creation, and boosting the rural sector. Indian Oil Corporation (IOC) in 2019 had 430 rural distributors in the North- East region of India, out of its total distributors 150 are women⁴. According to the Ministry of Petroleum and Natural Gas, around 8.8 million women were employed in activities related to the LPG supply chain under the PMUY scheme as of September 2021.

5. Economic empowerment: The release of LPG connection under this scheme is in the name of women belonging to the Below Poverty Line (BPL) family enabling the subsidy provision in the

² [Household air pollution](#)

³ [Niti Ayog](#)

⁴ [Business insider](#)

women's account. At the world's highest Indane LPG bottling plant situated at 11,800 ft. In Phey Village of Ladakh district, it is women's power that is playing a key role in the running of the plant. The plant is operated by 11 courageous Indian Oil women in very harsh weather conditions⁵.

6. Increase in women's participation: Since LPG cylinders are issued in the name of women, it is more likely that women would be considered in similar initiatives. Also, women who were not allowed to speak can reach out to the government with further recommendations. Additionally, as an Adhar card and bank account are a must for availing of this scheme, it will eventually open the gates for women in other sectors as well.

Evaluation of the scheme's impact on the rural household's socioeconomic well-being

1. Social Change: Before this scheme, the collection of firewood for the serving of meals was considered to be the duty of women. With the LPG initiative, it is more likely that male members of the family will also step ahead to learn cooking as it has become less time-consuming and feasible. This would decrease the prevailing patriarchy to some extent as the women and the male members of the rural households can equally contribute towards the well-being of the family.

2. Subsidised Health care: To fulfill the aim of the scheme, the government decided to provide financial support to the BPL households. Along with deposit-free gas connections, the government provides the first free LPG refill and stove (hotplate). The beneficiaries will be provided with a subsidy of ₹200 per 14.2 kg cylinder for up to 12 refills per year as of March 2023⁶. The subsidy is credited directly to the bank accounts of eligible beneficiaries.

3. Creation of employment: Approximately 1 lakh people have got job opportunities because of the implementation of PMUY through the LPG distribution network⁷. This scheme has also opened the doors for employment in manufacturing LPG cylinders, supply chains, distribution networks, and the servicing of LPG cylinders.

4. Opportunities for passive income: The time saved by the use of LPG cylinders has helped rural inhabitants, especially women, to invest their time in income-generating activities. Many women have been able to double their income as their time for cooking was reduced from 3 hours to 1.5 hours⁸. The PMUY facilitates the expansion of income opportunities and helps rural households to move beyond subsistence farming and look for other income-generating opportunities as well.

⁵ [Highest bottling plant](#)

⁶ [Subsidy 2023](#)

⁷ [The Print](#)

⁸ [Niti Ayog](#)

5. Introduction to local businesses: With the implementation of PMUY, markets have been set for LPG-related products and services. This includes sales of LPG stoves, cooking utensils, servicing of LPG, etc. The rural economy predominantly depends on agriculture and other primary occupations, this scheme and the introduction of local businesses can improve the economy of rural areas thus creating more job opportunities soon.

An assessment of the scheme's impact on mitigating climate change effects

While the main objective of this scheme was to address energy poverty and improve the health and well-being of women and children, it also had indirect implications for mitigating climate change effects. Here is an assessment of the PMUY scheme on climate change:-

1. Reduction of indoor pollution: One of the important benefits of the PMUY scheme was the provision of clean cooking fuel, primarily Liquefied Petroleum Gas (LPG), to replace traditional cooking fuels like biomass and kerosene. This shift to LPG has reduced indoor pollution. This has a positive impact on climate change as it reduces the emission of black carbon, particulate matter, and other harmful elements that contribute to global warming.

2. The decline of deforestation: The scheme aimed to discourage the use of biomass fuel such as firewood and agricultural residue which one gets from the forest. Forest conservation is necessary for mitigating climate change since the forest acts as a carbon sink, absorbing CO₂ from the atmosphere. India's forests and tree cover had a carbon sink of 29.38 billion tonnes of CO₂ equivalent in 2015⁹.

3. Mitigating Greenhouse Gas emissions: The combustion of traditional cooking fuels like kerosene and biomass releases a significant amount of greenhouse gases including carbon dioxide (CO₂), Methane (CH₄), and Nitrous oxide (N₂₀). The use of LPG has lower carbon emissions and fewer climate change impacts.

4. Improved energy efficiency: The way we cook today with the use of LPG requires less energy than how we did in the past. Modern kitchen stoves burn fuel more effectively and offer improved heat transfer. Enhancing energy efficiency reduces the carbon footprints brought on by cooking. The switch to LPG also contributes to resource conservation.

5. Enhanced access to renewable energy: The rural areas which back then focused only on conventional cooking methods are now showing their interest in accepting the technology and being parallel with time. Rural households are now using solar cookers to cook food. This acceptance of the new energy is the need of the time as it has larger benefits for the environment and ecology.

⁹ [The Indian Express](#)

Political impact of Pradhan Mantri Ujjwala Yojana

In Indian politics, there is a history of political leaders highlighting the significance of kitchen-related initiatives like 'The Annapurna scheme' and women-centric schemes like 'SABLA' to influence electoral outcomes. Along with the "Hindutva" ideology, what led to the success of the Bharatiya Janata Party (BJP) is its **"welfare schemes"**. In its first term, the BJP government launched many flagship welfare schemes like Pradhan Mantri Ujjwala Yojana, Jan Dhan Yojana, and Ayushman Bharat to address the problems with political strategy. After 2016, one can witness centralization in the designs and implementation of welfare programs. BJP conducted several campaigns at grassroots levels to promote Pradhan Mantri Ujjwala Yojana in 2016. The government's flag schemes had indeed influenced the pattern of voting. In the past (2014 elections) there was a gender imbalance in the BJP voter base. However, the 2019 general election has seen parity in the voting percentage of men and women at 66.79% and 66.68%, respectively. The turnout of women exceeded that of men in at least nine states and Union territories, with the highest in Manipur, Meghalaya, Arunachal Pradesh, Kerala, Dadra and Nagar Haveli, Uttarakhand, Goa, Mizoram, and Lakshadweep. To translate its slogan 'Sabka Saath Sabka Vikas' into tangible outcomes, the BJP had also put efforts into rural outreach. The PMUY contributed to an increase in LPG coverage from 61% in 2016 to over 99% in 2021, significantly narrowing the rural-urban divide in access to clean cooking fuel. The beneficiaries of this scheme come from diverse backgrounds and encompass various socio-political affiliations. This has resulted in support for BJP among various caste groups. In the 2019 election, one-third(34%) of Dalits voted for the BJP as compared to around one-fourth(24%) in 2014. Similar changes have also occurred among the upper OBCs. This is conspicuous that these welfare schemes have benefitted the BJP. Hence, to replicate this achievement the government should continue to promote welfare schemes at the local level along with addressing the shortcomings.

Challenges in the execution of the PMUY scheme

Pradhan Mantri Ujjwala Yojana has been called one of the successful schemes of India but some loopholes can affect its effectiveness in the future.

1. The unaffordability of LPG cylinders: The key hindrance is the cost of the refill as it is too high and the subsidy provided is too less (₹ 200). According to the CAG reports of 2019, the cost of refill has increased from ₹ 500 to ₹ 800. About 9.6% of beneficiaries took no LPG refills. Due to the cheaper rates and the availability of firewood, people find traditional cooking methods more affordable than LPG. The consumption of LPG among PMUY beneficiaries has remained low.

Year	The Cumulative increase in PMUY connection	LPG refills	Average refill per beneficiary
2016-17	2 crore	3.7 crore	1.9
2017-18	3.5 crore	9.1 crore	2.6
2018-19	7.1 crore	15.8 crore	2.2
2019-20	8 crore	22.8 crore	2.8
2020-21	8 crore	35.2 crore	4.4
2021-22	9 crore	31.3 crore	3.4

Note: In 2020-21 the annual consumption of LPG shot up among PMUY beneficiaries after three free refills were given by the Centre as part of the Pradhan Mantri Garib Kalyan Package from April 2020 to December 2020.

Source- RTI reply

2. Unawareness about the Subsidy: Many rural households think they can't use clean cooking fuel. Many of them are unaware of the initiatives taken by the government to improve their lives. If only people are made aware of the schemes and the subsidy provided, then only can they at least look for possibilities soon. In addition, many people are unaware of the 5 kg cylinder provision. According to a survey, 13% of the households did not receive the subsidy for their last LPG refill and 23% did not know if they had received it or not.

3. No proper Identification: The IOCL (Indian Oil Corporation) software's lack of input validation checks allowed the distribution of 0.80 lakh connections to beneficiaries under the age of 18 years. Also, 1.88 lakh connections were released against AHL TIN of males due to no proper system of identification of gender, age, etc.

4. Delays in installation and delivery: Due to the poor infrastructure in rural areas, there has been a delay in the process of installation. A delay of more than 10 days was noticed in the delivery of 36.62 lakh LPG refills against the stipulated delivery span of 7 days.

5. Lack of safety campaigns: It is important to acknowledge the fact that many rural households are using LPG cylinders for the first time. That is why the government needs to make sure those households who have availed of the scheme must be provided with proper guidelines and instructions. It has been a concern that many women keep the cylinder and the stove on the ground. For the proper utilization of the scheme's benefits providing knowledge through campaigns is a must.

6. Data trust is elusive: The government referred to the SECC- 2011 to identify eligible households. There are chances that people who are now wealthy enough are also included in the data and those who deserve are left out. Since the survey took place in 2011, there is a need to have alternative data after 2011 to be relied on.

7. Unavailability of documents: Many rural households live in isolation and many of them do not have proper documents like Aadhar cards, ration cards, or KYC documents. Due to this, it is difficult for them to grab opportunities under this scheme.

8. The distinction between BPL families: The scheme is only for BPL families who do not have any LPG connection and not for BPL families with an LPG connection. It is fundamental to understand that BPL families with or without LPG both cannot afford it. On one hand, BPL households have no connection, and on the other BPL households have a connection but still they struggle to refill it. This urgency must not be ignored by the government and must encourage them to further use it.

9. Lack of distributors: Lack of distributors is also a challenge in Durgam kshetriya Vitrak¹⁰ {hilly regions, tribal areas, forest areas, sparsely populated, disturbed areas, islands, and Left Wing Extremism (LWE) affected areas}. As there are many places where distributorship could not be established due to law and order or due to forest areas. This problem eventually results in inefficient customer service to the beneficiaries.

10.No feedback or follow-up mechanism: Many households have LPG but do not refill it and use it for many reasons. Rural women find it difficult to adopt LPG as they believe it is technical and dangerous. To overcome this there must be some mechanism so that they can contact the distributors if such a problem arises. There must be a mechanism to understand the grievances faced by women so that solutions can be brought to the table. Also, there is no follow-up mechanism to motivate women for further usage.

11. Multiple connections: AHL TIN (Aadhar-based Household LPG Transaction Identification Number) is a deduplication measure to prevent multiple connections under the PMUY scheme. It was implemented by the National Informatics Centre(NIC) and involved the use of a unique identification number. This system effectively prevents multiple connections within the PMUY scheme, however, it cannot identify the existing connections issued to the family members outside this

¹⁰ [Vikaspedia](#)

specific scheme. Also, it has been cited in a CAG report that LPG distributors often misuse the AHL TIN of beneficiaries as many beneficiaries are unaware of their respective AHL TIN.

12. Diversion of domestic LPG cylinders: Diversion refers to the potential misuse of domestic cylinders for commercial purposes. According to the data provided by CAG 1.98 lakh consumers had an annual consumption of more than 12 LPG cylinders. This unusually high consumption pattern seems unlikely and raises concerns about the possibility of diversion.

Opportunities for future initiatives

After examining the successful models of LPG in the world and gaining insights from it, India can create many opportunities for herself in the future. India can further strengthen Pradhan Mantri Ujjwala Yojana by learning various implementation strategies and policies from other countries as mentioned below.

1. Public-Private Partnership: Public Private (PPP) is a cooperative arrangement between government and private sectors. PPP programs focus on public welfare and also mutually beneficial relationships. To ease the access of LPG to users, the government of Kenya has partnered with three oil marketers and has been able to make LPG cylinders available and affordable to its users¹¹. Similarly, India can collaborate with private companies to further strengthen its PMUY scheme. It will not only increase the availability of LPG connections in households but also sustain its consistency which is a major problem today.

2. Availability of alternatives in the market: Clean cooking methods like solar energy and electric cooking can also be introduced in India. India stands 4th in solar PV development across the globe as of the end of 2021¹². India can further utilize its solar energy and encourage rural households to adopt them. It should be the aim of India to provide alternative cooking clean cooking solutions in the market to eliminate harmful chemicals.

3. International organizations and knowledge exchange programs: India can participate in international forums and gain insights from the experiences of other countries. Engaging with global initiatives like the Clean cooking alliance, The Global Alliance for clean cookstoves, etc can help this scheme to know the common problems beforehand so that suitable actions can be taken. Furthermore, India can also be a part of the Global LPG partnership.

4. Technology Innovation Hub and Research: Setting up a technology innovation hub and research will facilitate the growth of clean cooking technologies. These hubs can provide mentorship

¹¹ [The EastAfrican](#)

¹² [Press Information Bureau](#)

and funding to the innovators working on clean cooking solutions. India can also encourage local entrepreneurs and start-ups to develop cost-effective and sustainable solutions for clean cooking.

5. Behaviour Change Campaigns: The “Tubeho Neza “ campaign in Rwanda mainly focused on spreading awareness about the health and environmental benefits of clean cooking which largely proved effective¹³. Due to the connection and habit of traditional cooking methods, it is important to mentally prepare users to shift to clean cooking solutions. India can use similar campaigns to spread awareness and encourage households to clean cooking fuels.

Recommendations

1. Due to the unaffordability of LPG cylinders, on average the beneficiaries can secure only 2-3 refills in a year. A four-member household needs at least seven cylinders to meet its annual cooking energy needs, hence must incur at least ₹ 7,000 a year. Therefore, to encourage the consistent usage of LPG at least the first 3-4 free refills in a year should be provided to the beneficiaries. With this provision, the beneficiaries will have a minimum of three months to accumulate the funds for the upcoming cylinders purchase. Free refills can be provided with the proper utilization of the "Give it up" campaign. In addition, the government should explore the possibility of EMI-based provisions to maximize the benefits of the beneficiaries. The government may increase the subsidy amount to at least ₹ 300- ₹ 400. The government and OMCs (Oil Marketing Company) should agree on mutually decided periods to reconcile the subsidy payment for LPG, which should be provided to OMCs in advance based on their sales. The government should ensure timely subsidy disbursement directly into the beneficiary's account within the allocated period, relieving them of the burden of full payment. Setting a specified timeframe such as ten days, for beneficiaries to avail the cylinder after subsidy receipt can help manage the process effectively. Not utilizing subsidies for the same purpose followed by appropriate penalties can discourage misuse.
2. OMCs (Oil Marketing Company) should effectively conduct Information, Education, and Communication(IEC) activities. These awareness campaigns through online mode and offline 'melas' at various locations will help rural inhabitants to safely use LPG cylinders and promote the use of LPG. Word-of-mouth campaigns have proven effective so a little effort on this side can produce good results.
3. LPG connections issued to minor beneficiaries (below 18 years) should be transferred to the adult female member of the family. Also, connections issued in the name of male members should be transferred to the adult female of the family.
4. Aadhaar numbers of all adult family members including existing as well as new beneficiaries should be entered into the system to make deduplication effective. Furthermore, LPG software of OMCs should also include a provision to seed aadhaar numbers after the release of

¹³ [MECS](#)

the LPG connection. The input validation system should incorporate a mechanism of gender enrollment as well.

5. As per the MDG (Marketing Disciplinary Guidelines), LPG distributors have to deliver the gas cylinders within Targeted Delivery Time (TDT). A feedback Mechanism via calls should be initiated to keep a tab on the period of delivery and to provide valuable suggestions.
6. Pre-installation inspection should be thoroughly conducted before the issuance of an LPG connection to find out that beneficiaries' premises meet the required safety standard for LPG installation such as ventilated kitchen, elevated platform for the stove, etc. Pre-installation safety reports must be kept recorded and attached with SVs (Subscription Voucher). Installation certificates should be provided to the beneficiaries as evidence of proper and safe installation. Pradhan Mantri LPG Panchayat should carry out massive safety campaigns. This will help rural women to do away with the fear of LPG use and further provide them with guidance accordingly. Monthly reports on safety campaigns should be submitted by OMCs.
7. Government should encourage state governments and grass root organizations to provide valid data on rural BPL households. Recent and valid data can help to identify eligible households and serve the purpose of the PMUY scheme.
8. The PMUY scheme should include all BPL families irrespective of the fact they own an LPG connection. In this way, the government can help BPL households who struggle with refilling and provide assistance to them as well.
9. Lack of distributors can delay the process of LPG refills and installation. Along with simplifying distributorship procedures, implementing mobile distribution units in Durgam Kshetriya Vitrak can help to ensure that LPG cylinders reach every household. Also incentivizing distributorship can attract more applicants.
10. LPG distribution centers should be established by calculating the distance to ensure that LPG cylinders are accessible to rural inhabitants despite the challenges of reaching remote locations.
11. There should be a follow-up mechanism via calls as a reminder. This will encourage the beneficiaries to further refill the cylinders and sustain their usage.
12. Government should maintain an integrated database to address the issue of existing connections issued to family members outside of the PMUY scheme. An establishment of a comprehensive, centralized database including PMUY LPG beneficiaries, other LPG users, and other databases can help to identify duplicate connections. It is essential to establish a transparent and accountable process where beneficiaries are made aware of their AHL TIN. This will help them protect their entitlement.
13. A surprise inspection, a strong monitoring mechanism like cross-checking of data provided during enrolment with other official databases such as ration cards, and stringent penalties and legal action can aid to stop the diversion of LPG cylinders.
14. The public oil sector company should incorporate software that prevents multiple bookings from the same user.

15. An increasing number of accidents underlines the need for inspection at regular intervals. Therefore, subsidizing the cost of mandatory inspection conducted at an interval of every two years can avoid the risks of hazards.
16. The Ministry of Petroleum and Natural Gas should provide an upper age limit for the eligible applicants as a comparison of the LPG database and SECC 2011 revealed that the DOB of some beneficiaries was more than 100 years of age.
17. The government should try to encourage the use of 5 kg cylinders and provide an option to switch from 14.2 kg to 5 kg. As the price of a 5 kg cylinder is lower than 14.2 kg, many beneficiaries with small families will be benefitted.
18. OMCs should maintain data on the population getting delivered at the door point which is mandatory as per MDG. This will help to keep track of the performance of distributors and to facilitate the identification and resolution of any existing problems within the system.
19. Project Monitoring Information System (PMIS), a web-based solution to check the progress of the PMUY scheme at district, state, and national levels should be revised after every six months. Accordingly, actions must be taken by the government.
20. Guidelines of the PMUY scheme stated that the government has the option to conduct a third-party audit of the scheme. Government should not do any further delay and conduct the audit to foster the scheme.

Conclusion

In conclusion, Pradhan Mantri Ujjwala Yojana has made noteworthy progress in promoting clean cooking, protecting the environment, promoting good health, and changing the lives of millions of women. By further strengthening its weak areas it can continue to positively impact the lives of millions and serve as a model for similar initiatives worldwide.

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