

Female feticide: the role of national health mission in India

Arti Sharma, Sushanta K. Mishra, Arunava Ghosh and Tuhin Sengupta

Introduction

It was a rainy morning in August 2015, when Naveen Jain (refer to [Exhibit 1](#)), the newly appointed mission director at the National Health Mission (NHM) for the state of Rajasthan (India), walked out onto the balcony of his living room with a cup of strong coffee. He liked to begin his day with a relaxed breakfast while browsing through various news media. Instantly, an article from a local daily grabbed his attention: “Rajasthan: girls denied, 2,500 female foeticides and infanticides a day,” ran the headline. The article continued:

Some families leave their baby daughters to die of hunger and thirst to get around the law. In Jaisalmer District (one of the worst), five suspicious cases are recorded this month. Its state has one of the worst female-to-male ratios (883-1,000). [...] With nearly 2,500 cases of female foeticide or female infanticide a day, the state of Rajasthan is one of the worst places to be a girl in India ([Carvalho, 2012](#)).

The news spread like wildfire, drawing wider attention at the national and international levels.

The news story was a big blow to the long-term efforts of the NHM and particularly for its Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) cell. Since 2013, the NHM had taken several measures to combat the illegal practice of female feticide, such as the closure of unregistered sonography centers, the seizure and confiscation of their ultrasound machines, severe punishments for unregistered operators and clinics, regulating the use of ultrasound machines strictly within registered centers and restricting the number of medical practitioners authorized to conduct ultrasonography. Despite these efforts by the NHM, the situation had only worsened with increasing cases of female feticide. The report about Rajasthan was a cause for serious alarm. The more Jain pondered the news article, the greater were his feelings of helplessness and rage. Deeply moved by the news, Jain felt there had been a substantial inadequacy in the handling of the pressing issue alongside a failure to implement the preventive measures required. The root cause lay in the traditional preference for male progeny over women, which meant that all the state’s efforts to stamp out female feticide were being undertaken in vain. Jain made it his mission to change the prevailing age-old mindset that favored male children and to eliminate female feticide practices across Rajasthan state.

Background of the problem

India is a land of diversity. There are 29 states and 725 districts in the country [1]. The estimated population of India was 1.37 billion in June 2019 [2], comprising mostly of Indo-Aryan peoples (72%), followed by Dravidians (25%), with minor instances of Mongoloid and other ethnic groupings (3%) present among the nation’s inhabitants [3]. A secular state by

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its constitution, 80% of the population is Hindu, 13% is Muslim, 2.3% are Christians, 1.9% are Sikhs, 0.8% are Buddhists, 0.4% follow Jainism and the remaining 0.9% belong to no religious groups ([Census of India, 2011](#)). More than a hundred different languages and dialects are spoken across the country, with Hindi being the most widely spoken language.

Rajasthan is the largest state in India in terms of its geographical area, sprawling across 342,000 square kilometers. The state is composed of 33 districts, 244 subdistricts, 297 towns and 44,672 villages [4]. In addition, these districts are categorized into 10 high-priority districts, 11 desert districts and 6 tribal districts. According to the census report of 2011, the population of the state was 68,548,437 with men comprising approximately 51.47% of its overall population. Further, the census report recorded an overall literacy rate of 66.11% in the state; male literacy stood at 79.19% and female literacy was found to be considerably lower at 52.12%. The 2011 census report further mentioned a decline in the state's decadal population growth (2001-2011) from 28.41% to 23.44%. The data showed a remarkable decline in the female-male child sex ratio (CSR) from 909:1,000 to 888:1,000 in the period 2001-2011, reflecting the increase in underlying cases of female feticide (refer to [Exhibit 2](#)). In 2015, the state NHM office recorded the CSR at birth as 1.12 men for every 1 female (refer to [Exhibit 2](#)). As documented in the 2011 census reports, the CSR had reached its lowest point, at 914 women per 1,000 men, since India's independence in 1947 ([Dhar, 2011](#)).

The state is well-known across the globe for its rich kingdoms and royal palaces. The societal structure is largely patriarchal with less preference for girl children, specifically in its rural regions. Although the societal structure in urban areas is changing, the pace of change is at best gradual. The rural areas are still trapped in the age-old mindset of favoring male children. Traditionally, girls have been considered as liabilities primarily for two reasons. First, there is a strong cultural belief that considers a "son" as a "savior" for the parents, as only they are entitled to perform the last rites ensuring salvation after death. Women are not allowed to go to cremation grounds or take part in any funeral act [5], which further reduces the desire for girl children. Second, upon growing up, daughters would get married and move to their husbands' houses, unlike male children who would stay with their families and provide financial support. Moreover, the expenses incurred arranging weddings for daughters are considerably higher than the wedding expenses for sons and the tradition of giving dowries had worsened the situation, leading to the abortion of girls in the womb itself.

The societal structure in rural areas is rigid. Women are confined to the four walls of their houses with limited social exposure. Though the state government has initiated free education to promote the right to education, nothing seems to change. Moreover, to make girls marriage-ready, the responsibilities for household chores are thrown upon them from a very early age. This leaves no time for them to attend school or study. Additionally, people believe that educating girls can create problems when looking for suitable marriage alliances. Eventually, all this leads to a huge dropout rate among girls after primary education is completed. Owing to these cultural and social preferences for male children, female feticide has become an evil consequence across various states in India, including Rajasthan.

The Pre-Conception and Pre-Natal Diagnostic Techniques Act

A large proportion of the Indian population desires male progeny, which has increased the practices of prenatal sex determination and sex-selective abortion. Abortion is morally equivalent to murder, if fetuses are seen as people. From that point of view, taking their lives is against their fundamental right to life. Further, the issue gets more serious due to the patriarchal nature of the society, where the voice of women often goes unheard. Many times, women are not even aware about, informed of or asked before aborting babies. This affects the mothers of unborn children, both physiologically and psychologically. Moreover,

it is also a violation of women's rights to have control over their bodies, which makes this practice more gruesome. However, the desire for male children is so deeply rooted in the society that all contrary voices get suppressed. Elderly women in families themselves do not understand the plight of those forced to abort girls and the impact of this on the mothers. Owing to this, many professional sonography centers and doctors viewed it as a business opportunity and, by 2015, sex determination and sex-selective abortion had become a ₹10bn[6] industry in India (Gupta, 2015).

A large number of medical practitioners established themselves in this business with the bare minimum of medical facilities. This worsened the situation, as services were offered that compromised health and hygiene. In an attempt to ban the use of sex determination techniques at the pre and post stages of conception and to restrict its misuse in sex-selective abortion, the PCPNDT Act was enacted by the Parliament of India in September 1994 [7]. The rules for this Act were framed in 1996 and further amendments were made in 2004. The implementation of the PCPNDT Act led to some improvements in the ongoing crisis of female feticide in Rajasthan (refer to Exhibits 3 and 4). As many as 432 ultrasonography machines had been seized and there were 21 cases where the medical registrations of doctors were cancelled due to the implementation of this Act from 2011 to mid-2015.

The challenge

As Jain drove to his office on the day that he read the article about feticide, there was an ongoing battle in his mind about how to address this issue. Female feticide is not a problem that is confined to a single department or to one organization; it is a much bigger social issue with deeper roots and a much wider impact. As soon as he reached the office, he went through all the reports on female feticide and its related issues quickly. He found everything well-defined with all the elaborative instructions for action in documents, but the efforts to curb the feticide and related issues lacked adequate implementation and monitoring.

Reports outlined in detail the recent amendment by the state government, which allowed for the sealing of unauthorized sonography centers, the seizure of their equipment and the suspension of the licenses of medical practitioners performing illegal practices of female feticide. However, to his dismay, while everything appeared promising on paper, the actual implementation was not giving the expected results. Although the system was in place, the cultural mindset was so skewed by the desire for male children that families still preferred to get fetuses tested, no matter what the cost. Moreover, the toughest challenge was to identify which registered and unregistered medical practitioners and centers were performing illegal sex determination tests and female feticide. Locals remained tight-lipped about such centers and practices as the society had accepted female feticide as a cultural norm. All this contributed to the flourishing practice of illegal sex determination and abortion in sonography centers across the state. Each line of the reports Jain read claimed great achievements on paper but, in reality, nothing much had been done.

Besides the lack of proper implementation, another major concern was the large geographical area in the state of Rajasthan with challenging terrains such as deserts and hills, which made the initiatives difficult to implement at the grass roots. Some areas were also inhabited by tribal populations with their own dialects, thereby restricting the state's efforts. Any state-level plan required help and cooperation from the local representatives in villages, towns, districts and cities to spread the word condemning female feticide. Jain wondered whether community health workers from the Accredited Social Health Activist (ASHA) program of the Ministry of Health and Family Welfare of the Government of India[8] could help the NHM reach the intended target population. ASHA workers were local to the areas where they worked and had the trust and a ready-made rapport with their communities. They also understood and could speak their regional dialects; hence, their

assistance could make a big impact within a short span of time. Pondering over these thoughts, Jain called a meeting of senior executives from related departments to formulate the next steps.

The meeting

On September 3, 2015, the meeting began at 3 p.m. sharp. Jain was joined by R. C. Rawat from the Information Technology (Demography and Evaluation) section, Digvijay S. Rathore from the PCPNDT cell and Raghubir Singh from the legal cell. Jain gave a brief introduction, expressing his concern about female feticide and then asked for suggestions to combat the situation. Jain said:

Rajasthan has undertaken technological initiatives such as establishing e-governance in healthcare. This initiative connected the rural areas of Rajasthan through wireless services and provided birth certificates and information related to children. Such kinds of initiatives failed due to a lack of analysis and improper execution. Due to inadequate IT literacy and ineffective execution processes, e-governance in healthcare wasn't sustainable in the long run. I don't want this to be repeated, I want effective implementation, monitoring, and policing to ensure the successful execution of all measures and technological interventions with appropriate action blended together to implement control measures to combat the situation.

The discussion stretched out to 4 h during which the legal executive proposed an increase in the frequency of decoy operations [9]. The PCPNDT executive, Raghubir Singh, expressed his concern about the violation of privacy on the part of medical practitioners, stating sadly:

It's disheartening to see these sonography centers popping up like grocery stores. One of the cases reported that the lady bearing a child was misinformed by her own family and got the baby aborted. She died soon after due to improper medical facilities and ignorance. It seems that the doctors and medical staff are still operating behind curtains.

And, the plight of pregnant ladies is worrisome. Neither do they have a voice, nor are they asked. Sometimes they are just not aware that the baby is being aborted, affecting them both at the physiological and the psychological level.

Jain added further:

Also, when I see the statistics, there is a declining trend in the sex ratio during the decade 2001-2011 (from 909 to 888). For the last 5 years, the child sex ratio data is not available but Pregnancy and Child Tracking System data shows that there is a decrease in the sex ratio at birth. Data in 2014-15 based on more than 2.84 million births confirmed that the sex ratio at birth is around 929. It is observed that the sex ratio at birth increased in all the districts. But, the main issue is whether this change can be made long-lasting. We need a permanent solution to this problem, no quick fixes.

This gave new life to the brainstorming session, which ended with the decision being made to revamp the existing Pregnancy and Child Tracking Software (PCTS) and the ASHA software with detailed consultation and inputs from the PCPNDT and the legal cells. PCTS is a citizen-centric software application, which was used in Rajasthan for maternal care, newborn care, population control and to improve health services. PCTS captured the data from health care units and hospitals and connected citizens with the government directly, facilitating the government's reach to individual citizens by means of online portals or cell phones. ASHAs are the women recruited by the Ministry of Women and Child Development, who are paid to spread better awareness about health activities and family welfare services in villages. The ASHA software was used for online wage payment and captured the details of those services provided by ASHAs to their communities. It generated various reports to monitor the progress of the program.

For this purpose, Jain constituted a five-member committee under his presidency comprising of Rathore, Singh, Rawat and Shibhumi from the ASHA cell to look actively into the implementation of NHM efforts as part of a concrete action plan. The members discussed this and together they decided to follow a multipronged strategy to initiate measures to control female feticide and to draw up an action plan to sensitize people to the issue.

Control initiatives

The problem of female feticide is deeply rooted in the minds of people. There were strict laws, legal penalties and severe punishments including imprisonment under the PCPNDT Act (Bhaktwani, 2012), but nothing seemed to bring the situation under control. This prompted a stricter approach, which was quite difficult to imagine of a typical public sector enterprise. Jain was determined to turn the CSR figures around. For this, he and his team were ready to take all sorts of strict actions and also bear the risks associated with them. In the two months following the first meeting and after rigorous research, the committee came up with the following initiatives to control female feticide:

- Mukhbir Yojna; and
- decoy operations.

Mukhbir Yojna

In December 2015, this unique scheme was launched by the Rajasthan wing of the NHM [10]. The scheme was an initiative that involved ordinary people in the control of sex determination practices in the state. According to this scheme, the Rajasthan state government decided to announce a reward of [11] ₹200,000 to any mukhbir (a local word for “informer”) for giving authentic information about sex determination practitioners, including doctors and other medical practitioners in hospitals (DNA, 2015; The Hindu, 2015). The news of the launch of this new scheme, the first of its kind in India, was welcomed by the media. The scheme was launched with the following prime objectives:

- To curb the declining CSR in the society.
- To take actions against those misusing technology to hinder the birth of girls by bringing them under legal jurisdiction.
- To create awareness about and effective participation in the “Save the Girl Child” campaign.
- To curb the misuse of technology at the pre-conception and prenatal stages of pregnancy.
- To change the mindsets of people in favor of girl children for the enduring success of the policy.

Initially, the rewards were kept at⁶ ₹100,000 but the uptake was low. Further, there were only a few genuine cases as many individuals gave false information to claim the money. To control this, the reward money disbursement scheme was planned. A carefully devised means was established by the team to ensure that sex determination practitioners were caught, which also safeguarded the informers, who were witnesses. To make it more effective, 40% of the reward amounts were given to the Mukhbirs, 40% of the reward amounts were given to pregnant women and the remaining 20% was given to the attendants assigned to pregnant women. The role of the attendants was to make sure that illegal sex determination practitioners could not reach out to pregnant women anymore and to ensure that all the details of the children’s births were recorded.

This created a foolproof plan for the Mukhbirs but it required an efficient and effective machinery to monitor and control the process. Jain had also established a separate

investigation bureau along with fast-track courts. He summed up the contribution of this special cell in one of the monthly follow-up meetings:

The state government set up a PCPNDT Bureau of Investigation (PBI) which is a first of its kind in the entire country. This bureau has been given exclusive and unique powers to investigate and present the charge sheet in courts in cases where violations of the Act have been discovered. Special PCPNDT courts have also been established in the state to complement the efforts of PBI. Since the initial inception of the PBI, many investigations by the PBI and, as a result, many convictions by courts have proved that implementation of the PCPNDT Act is being carried out in the most stringent manner.

This led to the further tightening of the boundaries of the scheme and a message was communicated to the masses about the seriousness of the issue and the strict measures being adopted by the state.

Decoy operations

The informer scheme could not have been successful without the support of decoy operations, which were launched in December 2015. The decoy operations entailed random, surprise inspections by appropriate authorities at the level of the state, district or subdivision. The decoy operations were launched with the following prime objectives:

- To control the decreasing CSR in the state of Rajasthan.
- To facilitate the effective and efficient implementation of the PCPNDT Act.

The decoy operation guidelines detailed the different responsibilities of each official involved in the decoy operations. The decoy operations were preplanned with the help of pregnant ladies. A lady would be accompanied by police officials in plain clothes and by a close relative. The baby in the womb was provided insurance cover for the risk being taken by the mother to help a public cause. Decoy operations created a sense of fear among practitioners. The newspapers did a good job of reporting extensively about successful decoy operations ([One India, 2016](#)). The operation was successful in Rajasthan but as soon as information about decoy operations started to surface, people began to travel to other states for sex determination tests.

Jain had mixed feelings. On the one hand, he was happy to see the success of his efforts in his own state of Rajasthan, but on the other hand, he was concerned to see how enforcement agencies from other states could be used to curb this nuisance. To control such kinds of practices, he took the risk of ordering an interstate decoy operation for the first time. As the launch of the scheme, 36 decoy operations had been conducted in 2016 and 2017. In the past three months of the 2016-2017 financial year, six decoy operations (refer to [Exhibit 4](#)) were undertaken and of them three were interstate operations. One was undertaken in Haryana (May 20, 2016), one in Uttar Pradesh (June 14, 2016) and one in Gujarat was conducted on July 18, 2016.

This was the first time that decoy operations were undertaken at the interstate level in India. The news created a buzz that spread a wider appreciation among various governmental, nongovernmental and social agencies ([The Times of India, 2016](#)). The strict adherence to law and the severe punishment of offenders led to the shutting down of unregistered sonography centers with a sudden upsurge of such practices in surrounding states. The NHM decoy operations team received information about a pregnant lady being taken to the nearby state of Haryana to have her fetus examined. If found female, the family could have arranged a female feticide. Based on an informant's tip, the decoy operations team coordinated the raid plan with plain-clothed police in Haryana and eventually arrested a doctor and two nurses and seized an illegal sonography machine. The lady was rescued and the doctor's medical license was suspended. He was imprisoned later according to the terms of the PCPNDT Act.

IMPACT software

Jain and his team wanted all these measures to be in place for a longer period of time. This was much needed to foster a decisive shift away from the rigid cultural mindset that favored male children. To facilitate the process, they began thinking of some means of technological intervention. After consistent research and IT initiatives, the National Informatics Centre in Rajasthan had developed the greatly anticipated e-governance initiative called IMPACT software. The unique characteristic of this software was its indigenous creation without incurring any cost. The software enabled the online registration of more than 1,460 sonography centers, which facilitated the submission online of more than 70,800,000 copies of Form-F [12]. The software also eased the processing of the mandatory Form-F by allowing the submission of more than 8,000 forms by the centers on a daily basis. IMPACT software helped the NHM's initiatives in several ways:

- It provided for real-time access and monitoring of Form-F submissions and created a day end summary.
- All sonography centers were registered online on the IMPACT website. Sonography machines were connected to the system by means of tamper-proof tracking devices (either Active Tracker or Silent Observer). The tracker captured the screens of sonography machines and recorded them in compressed and encrypted forms. It was able to store data for a period of two years and could send reports using GPRS/SMS signals.
- It provided reminders for the renewal of sonography center registrations and daily submissions of copies of Form-F.
- It provided a robust database of centers and associated information such as their equipment, radiologists and tracking devices.

Review meeting

The committee met again to discuss the steps needed to make a long-term impact on the traditional mindset and came up with the following action plan enumerating the major areas of focus that were to be adopted diligently for implementation, execution and monitoring purposes (refer to [Exhibit 5](#)):

- Training and orientation workshops for the Mukhbir Yojna and IMPACT software.
- Effective public communication through press conferences and press notes.
- Issuance of circulars, office orders and guidelines as per requirements.
- Effective monitoring of sonography centers and devices for ensuring compliance.
- Timely review meetings of state officials and district PCPNDT coordinators.
- Creating a network of informers and conducting decoy operations accordingly.
- Generating awareness and educating people through ASHA workers to create a long-lasting culture of saving girls.
- The announcement of monetary prizes and various benefits for newly born girls to encourage the wide acceptance by society of female progeny.

The dilemma

Jain was convinced that technological innovations such as IMPACT software would greatly enhance the implementation of the various programs he had brought into being. He seemed convinced about the proposed control initiatives and the action plan but still, the

road to the final destination was not so straight. Policymakers dwelled on the fact that Jain was able to guide these initiatives to reasonable outcomes. Yet, some of the questions which remained unanswered were:

- How important were Jain's leadership skills in ensuring the success of the initiative?
- How should institutional frameworks be designed so that Jain's initiatives were channeled effectively through the bureaucracy?
- In other words, how could the institutional machinery help Jain work in an effective manner?
- Finally, what role would cultural and ethical issues play in this overall process?

Keywords:
Government,
Organizational behavior,
Public administration

Notes

1. Districts – Government of India Web Directory. Accessed June 20, 2019, www.goidirectory.gov.in/district.php
2. Source: <http://worldpopulationreview.com/countries/india-population/>
3. Source: CIA World Fact Book.
4. www.districtsofindia.com/rajasthan/statedistrict.aspx
5. The scenario is changing gradually with various examples emerging where girls have performed the last rites but the numbers of occasions are very few.
6. All figures are in INR unless otherwise stated; ₹1 = US\$0.015 on July 10, 2016.
7. According to this Act, activities related to genetic counselling, prenatal sex determination or preimplantation diagnostic techniques, such as selective gender in-vitro fertilization, before and after the conception are illegal, banned and are punishable under law, if anyone is found practicing them.
8. An Accredited Social Health Activist (ASHA) is a community health worker trained by a program instituted by the Ministry of Health and Family Welfare (Government of India) as a part of National Health Mission (NHM). ASHA workers are chosen in local villages and are given adequate training to act as health educators and promoters in their communities.
9. Note: Decoy operations refer to the sending of bogus patients to nab doctors and lab technicians involved in sex determination and abortion activities.
10. Note: "Mukhbir" is a Hindi word which refers to "informer" in English. "Yojna" is also a Hindi word, which means "scheme" in English. Thus, "Mukhbir Yojna" literally refers to the informer scheme' in English.
11. All figures are in INR unless otherwise stated; ₹1 = USD\$0.015 on July 10, 2016.
12. Form-F is a mandatory form submitted by medical practitioners under the provisions of Section 4(9), Rule 9(4) and Rule 10(1A) under the Pre-Conception and Pre-Natal Diagnostic Techniques Act, 1994, for the maintenance of records of pregnant women by genetic clinics/ultrasound clinics/imaging centers. Accessed on July 10, 2016, www.pcpndtbangalore.in/downloads/FORM-F.pdf
13. UN Sex Ratio Statistics, available at www.un.org/en/development/desa/population/
14. The World Fact Book, available at <http://www.webcitation.org/6MCaBqfKG>
15. Female feticide refers to the illegal abortion of female fetuses. It is calculated on the basis of the child sex ratio, which is considered natural when it ranges between 103 and 107. Any figure above this range indicates that there is female feticide.
16. Data Highlights: 2001 Census, available at www.censusindia.gov.in/Ad_Campaign/press/DataHighlights.pdf
17. India at a Glance: Population Census 2011, available at www.census2011.co.in/p/glance.php
18. Child sex ratio in India: 2001 versus 2011, available at http://censusindia.gov.in/2011-prov-results/data_files/india/s13_sex_ratio.pdf

19. "Dowry" refers to the traditional practice of giving money or goods to the family of newlywed grooms at the times of their weddings by the bride's family. The practice of dowry giving is quite common, which makes girls an economic liability.
20. The times are changing now with governmental policies and intervention favoring girls.
21. www.oit.edu/academics/degrees/diagnostic-medical-sonography
22. Refer Scott (2004) for further details.
23. Refer Scott (1995) for further details.

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Exhibit 1. Brief profile of Mr. Naveen Jain

The Government of Rajasthan has given charge of the Department of Skill, Employment and Entrepreneurship Development to Naveen Jain, a 2001-batch Indian Administrative Services (IAS) officer.

He is now Secretary for Labour, Employment, Skill and Entrepreneurship and Boiler Inspection and Medical and Health Services (ESI) and Commissioner for Labour and Employment for the Government of Rajasthan.

An IAS officer of the 2001 batch from the Rajasthan cadre, Jain won a gold medal at Lal Bahadur Shastri National Academy of Administration for the best report on the subject of land reforms in 2003. He undertook various initiatives in different government departments when he was serving as a district magistrate of Baran, Karauli, Hanumagarh and Rajsamand and a director/commissioner in different departments at secretariats or directorates.

He has also led various e-initiatives as the Mission Director of the National Health Mission in Rajasthan such as ASHA Soft, e-shubhlaxmi, Software for Malnutrition Treatment Centres – Kuposhan Watch, e-Upkaran (Equipment Management and Maintenance System).

He holds a B.Com (Hons) degree in business finance and a master's degree in finance and control. He also holds a Diploma in Public Policy from ICFAI University.

Exhibit 2. Child sex ratio statistics in different time periods

Table E1

Sl. No.	District	Child sex ratio (CSR) at birth			CSR (0-6 yrs.)		CSR at birth (2014-2015)		Sex ratio
		2010-2011	2011-2012	2012-2013	2001	2011	Live birth male	Live birth female	
1	Ajmer	887.00	892.00	897.00	922.00	901.00	57,827.00	54,074.00	935.00
2	Alwar	882.00	891.00	897.00	860.00	865.00	73,348.00	66,975.00	913.00
3	Banswara	927.00	929.00	922.00	902.00	934.00	45,631.00	43,334.00	950.00
4	Baran	923.00	913.00	917.00	915.00	912.00	24,029.00	22,877.00	952.00
5	Barmer	922.00	917.00	907.00	921.00	904.00	67,213.00	63,545.00	945.00
6	Bharatpur	865.00	868.00	870.00	919.00	869.00	57,869.00	53,660.00	927.00
7	Bhilwara	968.00	979.00	996.00	887.00	928.00	45,403.00	42,171.00	929.00
8	Bikaner	905.00	906.00	914.00	912.00	908.00	54,978.00	50,626.00	921.00
9	Bundi	894.00	908.00	924.00	925.00	894.00	19,813.00	19,131.00	966.00
10	Chittorgarh	912.00	913.00	909.00	885.00	912.00	29,355.00	26,814.00	913.00
11	Churu	894.00	894.00	900.00	929.00	902.00	37,839.00	35,703.00	944.00
12	Dausa	841.00	846.00	852.00	955.00	865.00	32,003.00	29,632.00	926.00
13	Dholpur	820.00	836.00	850.00	879.00	857.00	29,354.00	27,594.00	940.00
14	Dungarpur	872.00	881.00	899.00	918.00	922.00	32,963.00	30,063.00	912.00
15	Hanumangarh	874.00	876.00	879.00	911.00	878.00	41,556.00	39,593.00	953.00
16	Jaipur	846.00	849.00	850.00	872.00	861.00	152,193.00	138,666.00	908.00
17	Jaisalmer	841.00	846.00	850.00	934.00	874.00	17,590.00	15,626.00	888.00
18	Jalore	882.00	882.00	885.00	863.00	895.00	47,524.00	44,519.00	937.00
19	Jhalawar	864.00	875.00	888.00	NA	912.00	30,316.00	28,013.00	924.00
20	Jhunjhunu	914.00	917.00	920.00	899.00	837.00	33,765.00	30,388.00	900.00
21	Jodhpur	909.00	913.00	915.00	920.00	891.00	80,686.00	76,396.00	947.00
22	Karauli	830.00	838.00	837.00	949.00	852.00	30,263.00	28,421.00	939.00
23	Kota	846.00	869.00	876.00	936.00	899.00	38,593.00	35,433.00	918.00
24	Nagaur	844.00	850.00	851.00	919.00	897.00	61,055.00	58,065.00	951.00
25	Pali	883.00	886.00	887.00	873.00	899.00	39,978.00	36,961.00	925.00
26	Partapgarh	NA	NA	NA	850.00	933.00	18,786.00	17,726.00	944.00
27	Rajsamand	836.00	830.00	832.00	927.00	903.00	26,387.00	24,077.00	912.00
28	Sawai Madhopur	782.00	800.00	805.00	916.00	871.00	34,376.00	32,345.00	941.00
29	Shri-Ganganagar	889.00	894.00	895.00	906.00	854.00	37,459.00	34,728.00	927.00
30	Sikar	856.00	856.00	859.00	869.00	848.00	48,357.00	44,987.00	930.00
31	Sirohi	887.00	897.00	901.00	912.00	897.00	25,357.00	23,471.00	926.00
32	Tonk	925.00	944.00	943.00	964.00	892.00	28,485.00	26,733.00	938.00
33	Udaipur	870.00	871.00	880.00	948.00	924.00	71,088.00	64,392.00	906.00

Source: The authors have collected the data from primary sources

Exhibit 3. Status of implementation of the PCPNDT Act

Table E2										
No. of bodies registered (year wise)	Total number of registrations cancelled (give details year wise)	Total number of registrations suspended (give details year wise)	Total no. of cases filed under the PCPNDT Act	Total machines sealed/seized as inception (year wise)	Total machines sealed/seized currently in the state	Convictions (year wise) (provide details of convictions and convicted persons)	No. of medical registrations suspended	No. of medical registrations cancelled	Inspections year wise	
Up to 2012: 2,084.00	Up to 2012: 329.00	Up to 2012: 136.00	Up to 2012: 466.00	Up to 2012: 360.00	432.00	Up to 2013: 37.00	21.00	0.00	Up to 2012: 4,335.00	
2013: 115.00	2013: 14.00	2013: 19.00	2013: 112.00	2013: 24.00					2013: 1,540.00	
2014: 132.00	2014: 11.00	2014: 15.00	2014: 23.00	2014: 34.00		2014: 30.00			2014: 847.00	
2015: 161.00	2015: 41.00	2015: 15.00	2015: 25.00	2015: 14.00		2015: 49.00			2015: 1,435.00	

Source: The authors have collected the data from primary sources

Exhibit 4. Decoy cases list under the PCPNDT Act

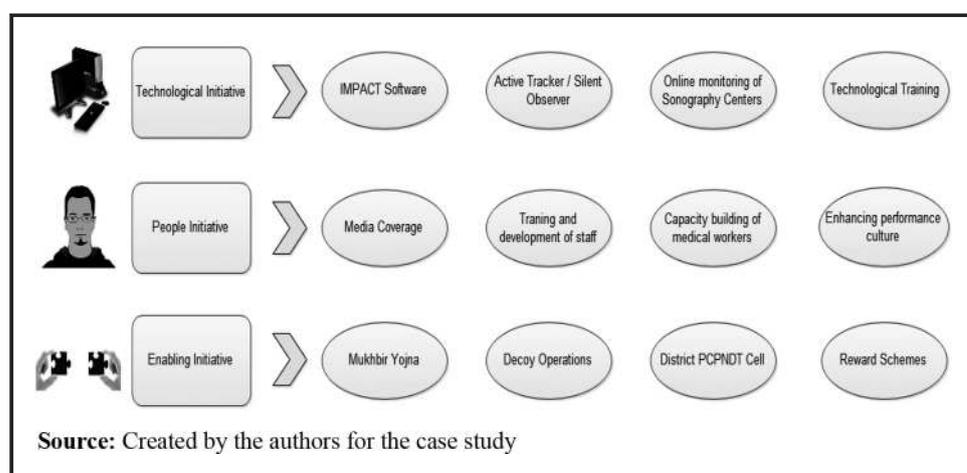
Table E3

Sl. No.	Date of investigation	Name of the investigating officer	Name(s) of the sonography center(s)	Name(s) of the Doctor(s)	Action taken
Financial year 2016-2017					
1	April 19, 2016	Shri Vikram Shewavat, Deputy Director and in charge, Crime Branch	Bhanumati, L.H.V. Pawan Kumar, Driver	Bhanumati, L.H.V. Pawan Kumar, Driver	FIR Number 04/2016, complaint registered in PBI Police Station
2	May 5, 2016	Shri Vikram Shewavat, Deputy Director and in charge, Crime Branch	Pramod Gurjar, Ashok Gurjar	Pramod Gurjar, Ashok Gurjar	FIR Number 05/2016, complaint registered in PBI Police Station
3	May 7, 2016	Shri Vikram Shewavat, Deputy Director and in charge, Crime Branch	Harphool Singh and Nirmal Mahela	Harphool Singh and Nirmal Mahela	FIR Number 06/2016, complaint registered in PBI Police Station
4	May 20, 2016	Raghuvir Singh, Deputy Director RCH and in charge, State PCPNDT Cell	Yadav Surgical and Jachcha Bachcha Hospital, Mahendragarh, Haryana	Dr Narendra Yadav and Dr Sanjay Yadav	FIR Number 07/2016, complaint registered in PBI Police Station
5	June 14, 2016	Raghuvir Singh, Deputy Director RCH and in charge, State PCPNDT Cell	Dr Amit Gupta Ultrasound Centre, Agra, Uttar Pradesh	Dr Amit Gupta, Chandrashekhar Arora and Manju Arora	FIR Number 09/2016, complaint registered in PBI Police Station
6	July 7, 2016	Raghuvir Singh, Deputy Director RCH and in charge, State PCPNDT Cell	Devpujan Hospital, Himmatnagar, Gujarat	Dr Jitendra Kumar Shukla and Auxiliary Nurse Midwife Mirmala Kumari	FIR Number __/2016, complaint registered in PBI Police Station

Source: The authors have collected the data from primary sources

Exhibit 5. Key Initiatives at NHM, Rajasthan for the BBBP program

Figure E1



About the authors

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