

STRENGTHENING THE SUPPLY CHAIN of menstrual hygiene products in india

INSIGHTS FROM SIX STATES



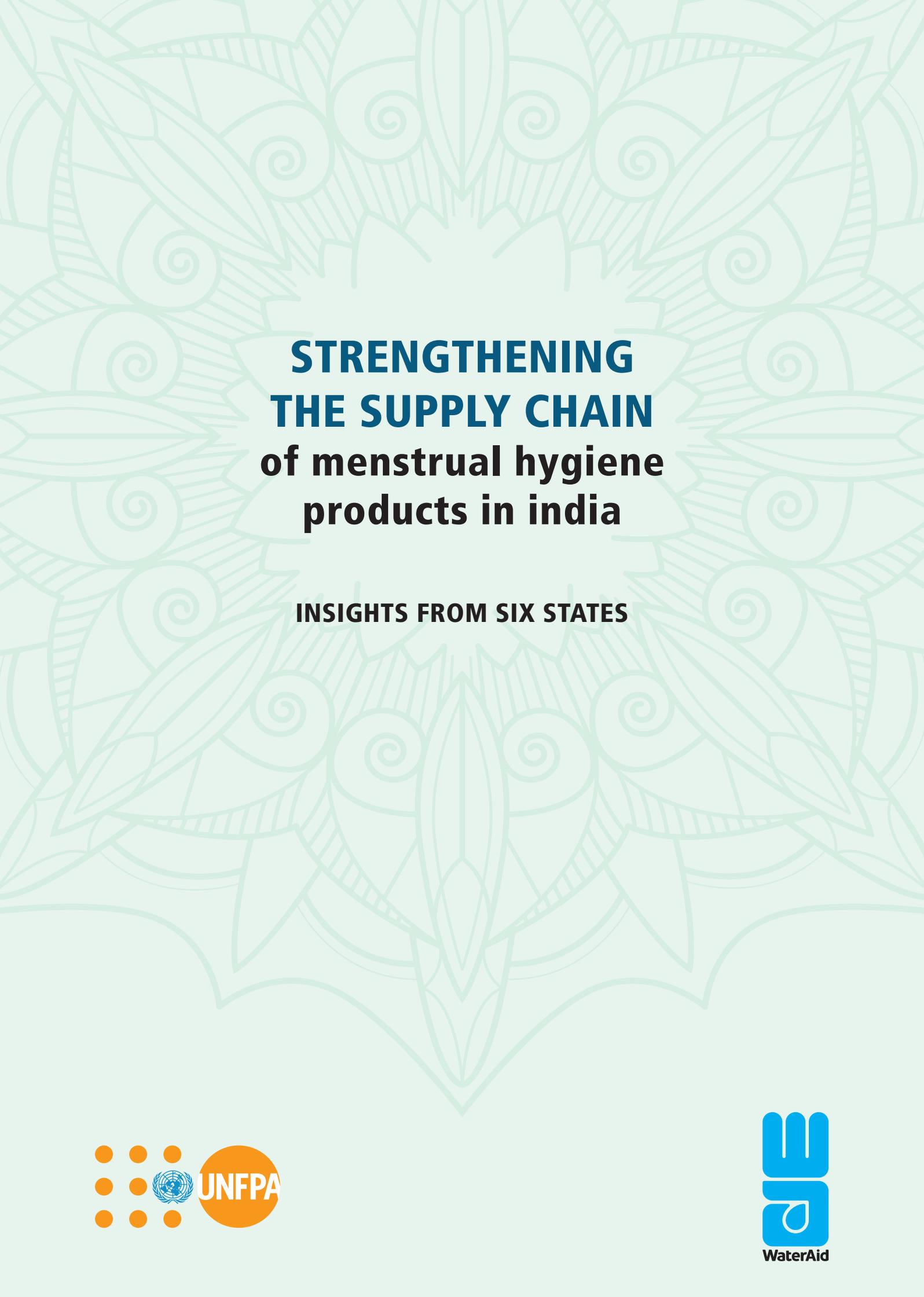
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The United Nations Population Fund (UNFPA) is the United Nations sexual and reproductive health agency. The organization is guided by the mission to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled. UNFPA calls for the realization of reproductive rights for all and supports access to a wide range of sexual and reproductive health services – including voluntary family planning, maternal health care and comprehensive sexuality education.

WaterAid India (Jal Seva Charitable Foundation) is part of the global WaterAid network which seeks to improve access to clean water, decent toilets and good hygiene for everyone, everywhere.

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A light green mandala pattern with intricate floral and geometric designs, centered on a white background.

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Contents

Executive Summary	6
Acronyms	8
1. Introduction and rationale for the study on supply chain of menstrual hygiene products under Government schemes	10
2. Methodology	12
2.1 Study Objectives	12
2.2 Process of data collection	12
2.3 Limitations of the study	14
2.4 Overview of supply chain models	15
3. Model 1: Supply chain mediated by State Medical Corporations	16
3.1 Description	16
3.2 Model in action	17
3.3 Government of Odisha's Khushi Scheme	17
3.4 Rajasthan Menstrual Hygiene Scheme and free distribution of sanitary pads	24
3.5 Considerations and recommendations for supply chain mediated by State Medical Corporations	30
4. Model 2: Supply chain operationalized by decentralized production and community distribution	33
4.1 Description	33
4.2 Model in action	34
4.3 Government of Bihar's JEEViKA initiative and the Sheikhpura model	34
4.4 Government of Madhya Pradesh Tejaswi initiative	37
4.5 Government of Tamil Nadu's SanFed (Sanitary Napkin Federation) model	37
4.6 Considerations and recommendations for decentralized production and supply of sanitary pads	38
5. Model 3: Supply chain facilitated through self-help groups for procurement and community distribution	39
5.1 Description and rationale	39
5.2 Model in action	40
5.3 Chhattisgarh: leveraging Swachhagrahis to sell sanitary pads	40
5.4 The Asmita Plus Scheme in Maharashtra: large scale decentralized procurement and distribution	42
5.5 Considerations and recommendations for supply chain through SHGs procurement	43
6. Conclusion and recommendations to strengthen supply chain of menstrual hygiene products for Government schemes	45
6.1 Conclusion	45
6.2 Recommendations to strengthen supply chain for menstrual hygiene products under Government initiatives	50
Annexure 1: Interactions with stakeholders for the study	53

EXECUTIVE SUMMARY

Context and Objectives

The goal of menstrual health, in part, requires sustained access to affordable, good quality menstrual hygiene products of choice. Government initiatives play a vital role in the menstrual health value chain, enabling access to essential menstrual materials for those who are marginalized and vulnerable. With support from the United Nations Population Fund (UNFPA), WaterAid India and Development Solutions conducted a study to explore and highlight supply chain models by which menstrual hygiene products can most efficiently and sustainably be supplied to adolescent girls and women through Government led initiatives.

Methodology

Key informant interviews were conducted with 28 State Government officials across six States to understand the supply chain processes in study states from procurement to distribution of menstrual materials to end beneficiaries. Publicly available Government tender documents for sanitary pads procurement, and other documentation on Government initiated supply chain of menstrual hygiene products, were also reviewed.

Menstrual Hygiene Supply Chain models for Government Procurement

Three models for supply chain of menstrual hygiene products exist for Government led initiatives.

1. Supply chain via State Medical Corporations:

States with large scale or State-wide menstrual hygiene schemes reaching adolescents in schools as well as girls and women through anganwadis and health centres deployed this model. A nodal State Government Department implementing the menstrual hygiene scheme, initiated the request for sanitary napkins, and the procurement process was undertaken by the respective State Medical Corporation. Following a robust tendering process, the selected vendor(s) were given the responsibility to deliver the sanitary pads directly to the distribution points, most often schools and district or block drug warehouses. Headmasters, nodal teachers and School Management Committee members oversaw distribution in schools. For non-school distribution, identified point persons collected stock from drug warehouses and provided the products to frontline workers for direct distribution to girls and women (in anganwadis or health centres). Sanitary pad vendors typically delivered the products on a quarterly basis as this facilitated coverage of all supply points, guarded against delays in stock delivery, and enabled stock to be available at supply points for a three-month period. A monitoring mechanism was in place to track delivery of the product and issuance of payment against delivery, with some States using digital platforms for real time and accurate monitoring.

The rationale for and inherent advantage of this model is that State Medical Corporations had well-established protocol and procedures for large scale procurement of medical equipment and drugs, and

MODEL 1	MODEL 2	MODEL 3
Supply chain mediated by State Medical Corporations	Supply chain operationalized by decentralized production and community distribution	Supply chain facilitated by SHGs for procurement and community distribution

had the capacity and expertise to ensure quality (of product), as well as accountability and transparency throughout the process. Some States had extended the use of online platforms for medical drugs and equipment procurement and distribution monitoring for the supply chain for sanitary napkins.

The Government of Odisha's Khushi Scheme and the Government of Rajasthan's Menstrual Hygiene Scheme both procured sanitary pads through the State Medical Corporations, and used electronic platforms to monitor the process.

2. Supply chain via decentralized production and community distribution by SHGs: This model, in contrast with centralized procurement, was defined by the establishment of local or decentralized production units at the community level, operated by women from the community. The goal of decentralized production was to make sanitary pads locally available, easily accessible, and affordable, while also creating a steady income stream for women. Decentralized production and distribution or sale of sanitary pads has evolved over the past decade. Manufacturing machines have improved in their design and operations (for instance, manual, semi-automatic, automatic machines), in production capacity (e.g., 2000 pads per day to 20,000 pads per day), and in training of women's groups and SHGs for community specific or larger-scale production (e.g., training may be basic or extensive including procurement, marketing and bookkeeping, operations and maintenance).

The National Rural Livelihoods Mission has bolstered decentralized production as an income generating activity for women and SHGs, with several States implementing this model at different scales (e.g., Tamil Nadu, Bihar). In Madhya Pradesh, the Department of Women and Child Development supported decentralized production under their schemes for women empowerment. In Bihar, JEEViKA producer groups established small-scale units in several districts, and facilitated greater availability of and access to pads at the community level. Larger district level production units, like JEEViKA's Sheikhpura unit aimed to meet the need for the entire district, through both school distribution and community sales. Tamil Nadu's SanFed was a well-established, State-wide successful model, where by the State

Medical Corporation procured pads from SHG units for large scale distribution across the State.

3. Supply chain via decentralized distribution and sales by SHGs (without production):

Decentralized production of sanitary pads facilitated local access to sanitary pads, yet faced several challenges in terms of production capacity and quality, procurement of raw materials, and operation and maintenance of machines. To overcome these hurdles, another SHG supported model came into existence. A nodal Government department supported SHGs to procure sanitary pads and sell them directly to girls and women in the community. The Government Department or SHG Federation facilitated the identification of vendors, and provided the list of approved vendors to SHG clusters, who in turn contacted vendors to place orders. Once the SHG cluster received the consignment from the vendor, they paid the vendor directly. SHGs used revolving funds to purchase the products from the vendor, or may have received a grant or loan from the supporting Government Department to purchase the pads. The procured products were distributed to SHG members for sale. SHGs maintained records of the number of packets given to the members for sales, as well as the amount sold, and money received.

Maharashtra and Chhattisgarh were implementing this model whereby SHG federations and clusters procured pads from vendors, and SHG women actively engaged in distributing sanitary pads at the community level. SHGs were not involved in the process of manufacturing, and participated only in procurement of the product and sales to the community. SHG members sold the pads at a slightly higher cost than procurement cost, and claimed the proceeds. This model served two requirements, income generation for SHG members, as well as community-based and consistent supply of menstrual hygiene products for adolescent girls and adult women.

Maharashtra's Asmita Plus initiative and Chhattisgarh's initiative through Swachh Bharat Mission follow this model. Asmita Plus has been particularly successful with rigorous monitoring of the process from procurement from vendor to sales at the community level.

ACRONYMS

ANM	Auxilliary Nurse Midwives
BIS	Bureau of Indian Standards
BRLPS	Bihar Rural Livelihoods Promotion Society
CHC	Community Health Centre
DSME	Department of School and Mass Education, Government of Odisha
GeM	Government of India e-market place
GMP	Good Manufacturing Process
HFF	Healing Fields Foundation
KGBV	Kasturba Gandhi Balika Vidyalaya
KII	Key informant interview
MD	Managing Director
MHM	Menstrual hygiene management
MoU	Memorandum of Understanding
MSME	Micro, Small and Medium Enterprises
NFHS	National Family Health Survey
O&M	Operations and maintenance
OSMCL	Odisha State Medical Corporation limited
PSI	Population Services International
RKSK	Rashtriya Kishor Swasthya Karyakram
RMSCL	Rajasthan Medical Services Corporation Limited
RTPP	Rajasthan Transparency in Public Procurement Act
SBM-2	Swachh Bharat Mission (Grameen) Phase 2
SHG	Self-help group
SMC	School Management Committee
TNCDW	Tamil Nadu Corporation of Development for Women
TNMSC	Tamil Nadu Medical Services Corporation
U-DISE	Unified District Information System for Education
UNICEF	United Nations Children's Fund

DEFINITION OF KEY TERMS

Menstrual health: Menstrual health is a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity, in relation to the menstrual cycle¹. Achieving menstrual health implies that women, girls, and all other people who experience a menstrual cycle, throughout their life-course, are able to:

- ❁ access accurate, timely, age-appropriate information about the menstrual cycle, menstruation, and changes experienced throughout the life-course, as well as related self-care and hygiene practices.
- ❁ care for their bodies during menstruation such that their preferences, hygiene, comfort, privacy, and safety are supported. This includes accessing and using effective and affordable menstrual materials and having supportive facilities and services, including water, sanitation and hygiene services, for washing the body and hands, changing menstrual materials, and cleaning and/or disposing of used materials.
- ❁ access timely diagnosis, treatment and care for menstrual cycle-related discomforts and disorders, including access to appropriate health services and resources, pain relief, and strategies for self-care.
- ❁ experience a positive and respectful environment in relation to the menstrual cycle, free from

stigma and psychological distress, including the resources and support they need to confidently care for their bodies and make informed decisions about self-care throughout their menstrual cycle.

- ❁ decide whether and how to participate in all spheres of life, including civil, cultural, economic, social, and political, during all phases of the menstrual cycle, free from menstrual-related exclusion, restriction, discrimination, coercion, and/or violence.

Menstrual hygiene products: Materials used to absorb or collect menstrual blood, including sanitary pads, cloth and cloth pads, menstrual cups.

Supply chain: Supply chain refers to the series of activities/processes required by an organization to deliver goods or services to the consumer. In the case of menstrual hygiene materials, the supply chain comprises of a series of events from procurement or manufacture of the products (e.g., sanitary pads) to their distribution to the end users – adolescent girls.

Procurement: Procurement refers to the act of obtaining goods or services via a tendering process.

¹ Hennegan, J., Winkler, I.T., Bobel, C., Keiser, D., Hampton, J., Larsson, G., Chandra-Mouli, V., Plesons, M., & Mahon, T. (2021) Menstrual Health: A Definition for Policy, Practice, and Research. *Sexual and Reproductive Health Matters*. <https://doi.org/10.1080/26410397.2021.1911618>

Introduction and rationale for the study on supply chain of menstrual hygiene products under Government schemes



India has a vibrant and diverse menstrual hygiene product landscape, comprising of disposable sanitary pads, reusable cloth pads, menstrual cups, among others. The past decade witnessed significant improvements in access to and use of menstrual hygiene products. The National Family Health Survey (NFHS)-4 reported that as of 2015-2016, 57.6% of young women ages 15-24 years used a hygienic method of protection, as opposed to just 12.0% who had access to sanitary pads as per a survey in 2010-2011². NFHS-5, conducted in 2019-2020, indicated further increase in sanitary pad use in several States³. Bihar, for instance, registered a marked 30% rise in the use of sanitary pads among young women ages 15-24 years - from 27.8% in 2015-16 to 58.8% in 2019-2020⁴. A study by Population Services International (2018), using data from NFHS- 4 (2015-2016), estimated that 35.4 million adolescent girls exclusively used commercial sanitary pads, and 19.2 million adolescents used a mix of sanitary pads and homemade products⁵.

² International Institute for Population Sciences (IIPS) and ICF. 2017. National Family Health Survey (NFHS-4), 2015-16: India. Mumbai: IIPS.

³ National Family Health Survey – 5 (2019-2020). State Factsheets. Available at: http://rchiips.org/NFHS/NFHS-5_FCTS/NFHS-5%20State%20Factsheet%20Compendium_Phase-I.pdf

⁴ National Family Health Survey – 5 (2019-2020). Bihar Factsheet. Available at: http://rchiips.org/nfhs/NFHS-5_FCTS/FactSheet_BR.pdf

⁵ PSI (2018). Expanding access to menstrual hygiene products in India. Available at: https://www.psi.org/wp-content/uploads/2020/02/Expanding-Access-to-Menstrual-Hygiene-Products-in-India_2018.pdf

Greater use of menstrual hygiene products was indicative of greater availability and access to said products, as well as increased awareness about menstruation and menstrual hygiene. Greater availability of sanitary pads was driven by several forces such as higher market penetration of commercial brands especially in rural India, entry of new and low-cost brands, and importantly, Government initiatives at the State and National levels that have made low-cost pads accessible through free or subsidized distribution particularly to school going girls, and via the establishment of local manufacturing units⁵.

To facilitate good menstrual health, ensuring sustained access to affordable, good quality menstrual hygiene products of choice is critical, while simultaneously addressing other aspects of the menstrual health value chain (explicated in the definition of menstrual health). Government initiatives play a vital role in the menstrual health value chain, enabling access and facilitating

awareness for those who are marginalized and vulnerable.

This study identified and examined the supply chain of menstrual hygiene products in six States, and sought to highlight supply chain models by which menstrual hygiene products can most efficiently and sustainably be supplied to adolescent girls and women through Government supported initiatives. Over the course of the study in six States and discussions with other stakeholders, the three models presented in this document emerged as the prominent supply chain models for Government led initiatives on the distribution and sales of menstrual hygiene materials.

The study focused on six States (Bihar, Chhattisgarh, Madhya Pradesh, Odisha, Rajasthan and Telangana), that were the focus of the UNFPA supported project undertaken by WaterAid India to improve the menstrual health and hygiene of adolescent girls.



2.1 Study Objectives

The study objectives were twofold:

1. To understand the supply of safe menstrual hygiene products to adolescent girls through State Government interventions in six States, namely Bihar, Chhattisgarh, Madhya Pradesh, Odisha, Rajasthan, and Telangana⁶ and identify promising practices
2. To propose considerations and recommendations for Government of India -led initiatives (at National and State levels) to facilitate supply of safe and hygienic products to adolescent girls through strengthened supply chain of these products in India in general, and for the six project States in particular

The study findings are relevant for National and State Governments, as well as development partners who support Government led menstrual hygiene management (MHM) initiatives.

2.2 Process of data collection

Before proceeding with the study in each State, the research team reached out to relevant Government departments informing them about the study, and seeking their support to speak with Government

⁶ These six States were selected based on work UNFPA and WaterAid India are undertaking to improve menstrual health and hygiene among adolescents from 2020-2022.

officials who could provide insights on supply chain processes. The request outlined the purpose and objectives of the study and the areas of inquiry.

For each of the six States, specific Government Departments and initiatives on menstrual hygiene were identified to understand the menstrual hygiene supply chain (Table 1). Key informant interviews (KII) were sought with officials who could speak to these specific initiatives, as well as with non-Government stakeholders who were involved in the initiatives. In addition, one to one and group discussions were also conducted with a limited number of teachers (in Odisha and Rajasthan), ASHA workers and ANMs (in Odisha, Rajasthan, Chhattisgarh, Bihar), SHG members (in Chhattisgarh, Madhya Pradesh), and adolescent girls in the community (in Rajasthan) to get some insights on last mile distribution practices, access and challenges, if any. KIIs and one-to-

one/group interactions were conducted between December 2020 and April 2021. The number of KIIs and interactions conducted in each state are listed in Annexure 1.

KIIs were conducted after seeking informed consent, and on assurance of confidentiality. Questions were shared with key informants prior to the interview. While providing consent, many respondents asked that certain insights (e.g., their opinions on the gaps and challenges with schemes) not be included in the report and that their identities be kept confidential in all study documents.

In addition to KIIs, Government online portals (that carry notifications related to tenders), publicly available tender documents for sanitary pad procurement in the public domain, and other documentation⁷ on Government initiated supply

Table 1: State Departments and schemes identified for the study

State	Departments and Government agencies	Menstrual Hygiene or related scheme/initiative
Odisha	Department of School and Mass Education Odisha State Medical Corporation Limited	Khushi Scheme
Bihar	Department of Education Bihar Rural Livelihoods Project (JEEViKA)	JEEViKA initiative on decentralized production units
Madhya Pradesh	Department of Education Department of Women and Child Development Department of Health and Family Welfare	Udita Tejaswi initiative on decentralized production unit
Rajasthan	Department of Health and Family Welfare Directorate of Women Empowerment Rajasthan Medical Services Corporation Limited	Menstrual Hygiene Scheme
Chhattisgarh	Department of Health and Family Welfare Department of Rural Development and Panchayati Raj	Swachh Bharat Mission and sanitary pad distribution via Swachhagrahis/ Self-help groups
Telangana	Department of Health, Rashtriya Kishor Swasthya Karyakram Department of Education Department of Women Development and Child Welfare	No specific scheme

⁷ Documents reviewed included scheme specific documents, research and documentation on the scheme by Government and non-Government stakeholders, and literature on supply chain of Government Schemes

chain of menstrual hygiene products, were reviewed to ascertain procurement criteria and processes, notification of selection for the tender, and supply chain processes. Further, efforts were made to contact vendors who were selected for Government procurement in Odisha and Rajasthan in 2020 and 2021, and the vendor in Chhattisgarh that provided sanitary pads to SHGs starting 2021. However, no interview could be held with any of these manufacturers due to non-response to emails and phone calls.

KIs and document reviews explored the following aspects of the menstrual hygiene product supply chain:

- ✿ Type of product
- ✿ Volume preference for bulk versus staggered procurement
- ✿ Procurement criteria
- ✿ Quality assurance procedures
- ✿ Budgetary allocations and expenditures
- ✿ Challenges in tendering processes
- ✿ Good practices in procurement of menstrual hygiene products
- ✿ Distribution of products after procurement
- ✿ Management of stock at distribution points
- ✿ Monitoring of distribution

2.3 Limitations of the study

A study of supply chains of menstrual hygiene products that explored how procurement and distribution channels were managed was a sensitive issue for the Government – this applied not only to menstrual hygiene products, but to a range of public goods and services (e.g., Public Distribution Schemes, essential medicines). Menstrual hygiene schemes were launched by States with promise of change and improved health outcomes for millions of girls. Sanitary pad distribution initiatives were needed, well intentioned, supported by committed leaders and officials, and supported by budgetary allocations. Supply chain processes were however, complex, involving a range of stakeholders from the State, districts, block and institutional levels, and a

series of activities. Quality assurance across supply chain activities was challenging with inevitable gaps that Government departments hesitated to disclose, due to repercussions. In some States, officials explicitly asked that the supply chain processes be presented in a manner that described the processes, without assessing the processes, and their gaps or loopholes. In other States, officials were uncomfortable speaking about the details of the scheme to the extent that the interview was often passed on to other officials, often at a junior level. As a result, information was difficult to obtain despite numerous discussions.

In select States, such as Telangana and Madhya Pradesh, large scale supply chain for menstrual hygiene products was not yet underway. In these States, an attempt was made to examine potential models for supply chains and smaller initiatives.

The study revealed that vendors (manufacturers of products, production machines, raw materials⁸) played a vital role in the supply chain in both procurement and distribution process. Their perspective was crucial for understanding the supply chain processes. The team contacted vendors in selected States (Odisha, Rajasthan and Chhattisgarh⁹), but were unable to secure interviews. Understanding the vendors' perspectives, particularly related to manufacture of products as per sanitary napkin standards specified by the Bureau of Indian Standards (BIS), delivery of products to supply points, adherence to monitoring mechanisms established by the Government/scheme (e.g., signing and submission of invoices), time lags in delivery, and challenges faced in the process, would have helped frame recommendations for vendors and to strengthen Government engagement with these vendors. The Indian product landscape study provided some insights into the vendor perspective, highlighting challenges related to Government tender processes such as registering on the Government e-Marketplace (GEM) portal, and limited knowledge of revised quality standards of sanitary pads issued by BIS.

⁸ Manufacturers of sanitary pad production machines and raw materials form a part of the value chain for decentralized or local manufacturing of sanitary pads undertaken by SHGs (as seen in Bihar)

⁹ In Odisha, the three vendors selected under the 2021 tender were contacted; in Chhattisgarh, Suidha Consulting who makes the PESH Care pads was contacted; and in Rajasthan the two vendors for RMSCL were contacted.

The study did not examine beneficiary perspectives. Due to COVID-19 school closures, speaking with girls and teachers would have been challenging. Further, discussions with key informants revealed that sanitary pad distribution was not uniform across States. An in-depth understanding of beneficiary perspectives would have required careful and representative sampling of those who had benefited from product distribution schemes, as well as those who were unable to access these schemes.

2.4 Overview of supply chain models

This study revealed that Government led initiatives for supply chain of menstrual hygiene

products implemented one of the following three models:

1. Supply chain mediated by State Medical Corporations
2. Supply chain operationalized by decentralized production and community distribution
3. Supply chain facilitated through self-help groups for procurement and community distribution

This paper briefly describes each of these models and details the operational aspects of the supply chain (procurement and distribution) using insights gained from the six project States. Considerations for each model is presented at the end of each section, with a conclusion and recommendations presented at the end of the paper.

3

Model 1: Supply chain mediated by State Medical Corporations



3.1 Description

States with large scale or State-wide menstrual hygiene schemes reaching adolescents in schools as well as girls and women through anganwadis and health centres deployed this model. A nodal State Government Department implementing the menstrual hygiene scheme initiated the request for sanitary napkins, and the procurement process was undertaken by the respective State Medical Corporation, following a tendering and selection process. Once selected, the vendor(s) were given the responsibility to deliver the sanitary pads directly to the distribution points, most often schools and district or block warehouses that typically stored medical drugs and other medical equipment. From these warehouses, identified point persons collected and distributed the stock to frontline workers for direct disbursement to girls and women (in anganwadis or health centres). Sanitary pad vendors typically delivered consignments on a quarterly basis as this facilitated coverage of all supply points, guarded against delays in stock delivery, and enabled stock to be available at supply points for a three month period. A monitoring mechanism was in place to track delivery of the product and issuance of payment against delivery, with some leading States such as Odisha and Maharashtra using digital platforms for real time and accurate monitoring.

The rationale for and inherent advantage of this model was that State Medical Corporations had well-established protocol and procedures for large scale procurement of medical equipment and drugs, and had the capacity and expertise to ensure quality (of product), accountability and transparency throughout the process. Some States extended the use of online platforms for medical drugs and equipment procurement and distribution monitoring for the sanitary pad supply chain.

3.2 Model in action

Supply chain processes spearheaded by State Medical Corporations in collaboration with nodal departments implementing a menstrual health and hygiene scheme were strong in Odisha and Rajasthan. Details of these two States are provided in this report. Other States have implemented this model in the past (e.g., Chhattisgarh under the Suchita Scheme, Bihar, Tamil Nadu¹⁰), or will consider adopting the model for the future (e.g., Madhya Pradesh). Table 2 below provides a snapshot of the status of implementation of the model in the six project States.

3.3 Government of Odisha's Khushi Scheme

Description of the Scheme

The Government of Odisha launched the Khushi Scheme in 2018 to provide free sanitary pads to over 17.25 lakh female students in grades 6-12 in Government and Government-aided schools. Sanitary pads were also made available at a highly subsidized rate to rural women through ASHAs. The total allocated budget for the scheme over a period of five years was INR 466.08 crore. The Scheme was and continues to be spearheaded by the Department of School and Mass Education (DSME), and combined free and highly subsidized distribution of sanitary pads with education on menstrual hygiene.

Supply chain process

Procurement: Initiation and budget allocation:

For the procurement of sanitary napkins, DSME collaborated with the Odisha State Medical Corporation Limited (OSMCL) under the National Health Mission, to execute procurement and facilitate distribution through selected vendors. Since the Khushi Scheme commenced in 2018, OSMCL undertook procurement of sanitary pads to

Table 2: Overview of where model 1 is being implemented across the six project States

State	Model currently being implemented
Odisha	Currently being implemented through the Khushi Scheme (detailed in this report)
Rajasthan	Currently being implemented through the Menstrual Hygiene Scheme (detailed in this report)
Bihar ¹¹	Implemented in the past, currently inactive
Chhattisgarh ⁶	Implemented in the past through the Suchita Yojana in 2018, currently inactive May be considered under the new MH scheme
Telangana ⁶	Under consideration by Department of Health, under Rashtriya Kishor Swasthya Karyakram (RKSK)
Madhya Pradesh	Not being considered at present

¹⁰ During interviews, officials from Bihar and Chhattisgarh were asked about procurement by their respective State Medical Corporations. However, since those schemes were not active at the time of the interview, they provided limited inputs or were not in a position to share details. Tamil Nadu has successfully implemented procurement through the State Medical Corporation, but KIs were not conducted with officials there.

¹¹ Efforts were made to reach State Medical Corporations in Bihar, Chhattisgarh and Telangana, but interviews were not secured.

ensure that quality products were available to school going girls across the State. While the Scheme was launched in 2018, sanitary pad distribution started in 2019.

A Memorandum of Understanding (MoU) was signed between the Managing Director of OSMCL and the Secretary of Health in 2019 that officially appointed OSMCL as the Government agency to undertake procurement and safe storage of medicines and medical equipment for the State over the next 20 years. Sanitary pad procurement was also included in this agreement.

The budget for procurement of sanitary pads came primarily from the DSME, with a limited budget allocated by the National Health Mission for sanitary pads required for health care facilities and for distribution through ASHAs. OSMCL did not contribute to the budget to purchase sanitary pads; their primary contribution was in kind, expressed through the operationalization of the procurement and supply chain processes.

Indenting (estimating need): Indenting of sanitary pads or estimating the quantity required was done at the State level. DSME shared the Unified District Information System for Education (U-DISE) data with OSMCL, to estimate the number of girls in Standards 6-12 enrolled in Government and Government aided schools, and residential schools, namely the Kasturba Gandhi Balika Vidyalayas (KGBV). The total quantity required for procurement for the year was calculated based on the number of eligible girls as per U-DISE, with each girl receiving one packet of six pads per month.

Floating the tender: OSMCL prepared detailed tender documents, drawing from formats used for medical drugs and equipment procurement, outlining all necessary criteria and requirements for vendor selection. Assessment criteria were specified in OSMCL tender documents and are detailed in Table 3 and Table 4.

Till 2020, OSMCL used the Government of India's GeM portal to facilitate procurement, inviting all those who had registered on the portal to apply

for the tender. The tender was also shared on other public platforms like newspapers and OSMCL's own website. Starting December 2020, OSMCL used the e-Khushi portal for the process.

Reviewing bids received: On receiving bids by the set timeline, OSMCL initiated an exhaustive review process. The review committee was formed by OSMCL with representatives from OSMCL, DSME, and members from the State National Health Mission; the Managing Director of OSMCL typically served as the Chair of the Committee.

Each bid was assessed against the criteria listed in the tender document, and product samples submitted by vendors were tested in a Government laboratory to confirm adherence to quality standards. The final selection was determined by identifying vendor(s) who met the requisite criteria, had the capacity to deliver across the State to all distribution points, and were able to provide the product at the lowest cost. More than one vendor was selected to meet the tender requirement, as this facilitated timely delivery, and provided a backstop measure in case a vendor was unable to supply or supplied poor quality products (ascertained during checks described later). In addition to the review of bids by the review committee, pre-bid meetings were held before submission of bids. After bids were submitted, a meeting was held with applicants for clarifications and amendments to the bid documents.

OSMCL considered bids from Odisha based Micro and Small Enterprises at a price preference of a certain percentage (e.g., 10%) viz -a – viz Odisha based Medium and Large Enterprises. If the Micro and Small Enterprise had quality certification for the product, an additional price preference (e.g., 5%) may be awarded.

For the latest tender for the Khushi Scheme (initiated in December 2020), OSMCL's website indicated that out of 19 bids received in response to the tender, seven sellers qualified against the criteria listed in the tender document. Of these, three sellers were selected that met the procurement criteria (Figure 1¹²). The ratio of total requirement distributed across vendors was displayed on the public platform.

¹² Source: <https://bidplus.gem.gov.in/bidding/bid/getBidResultView/m8AkpSwsj3jDcgh0DENjG-P8bSOq0oCoHlI2EO9RRGw>

Figure 1: List of sellers who qualified for OSMCL bid to provide sanitary napkins for Khushi Scheme 2021

S. No.	Seller Name	Offered Item	Total Price	Rank
1	SUSHEEL YARNS PRIVATE LIMITED	Item Categories: SANITARY NAPKINS OR MATERNITY PADS	₹ 60447384.00	L1 (50%)
2	VAISHALI HYGIENE PRODUCTS	Item Categories: SANITARY NAPKINS OR MATERNITY PADS	₹ 36268430.40	L1 (30%)
3	SHREE RADHE HYGIENE PRODUCTS PRIVATE LIMITED	Item Categories: SANITARY NAPKINS OR MATERNITY PADS	₹ 24178953.60	L1 (20%)
4	MAFATLAL INDUSTRIES LIMITED	Item Categories: SANITARY NAPKINS OR MATERNITY PADS	₹ 127611144.00	L2
5	BELLAPREMIER HAPPY HYGIENECARE PRIVATE LIMITED	Item Categories: SANITARY NAPKINS OR MATERNITY PADS	₹ 141043896.00	L3

Issue of contracts: A one-year rate contract was signed with the selected vendor(s). The prices quoted by the vendor(s) were finalized in the contract and not subject to change during the contract period. When more than one vendor was selected to supply products, the proportion of supply that each vendor would cater to along with distribution points was clearly communicated. The distribution was often determined by geographic coverage of each vendor, and the vendor's capacity for manufacturing. Each vendor was registered on the e-Khushi platform, and was provide the list of supply points for their particular geographies. The purchase orders were then placed and the vendors commenced the process of distribution as per the notified schedule.

Supply of products: Under the Khushi scheme, the selected vendor(s) were expected to supply the sanitary pads to the designated distribution points (schools, drug warehouses) within 70 days of the purchase order. The U-DISE portal provided the location of all schools, while the locations of drug warehouses were provided by OSMCL based on their existing records for medical drugs and equipment. This 70 day period enabled the vendor to dispatch the product to all distribution points. For instance, if the vendor was given charge of a particular district, they needed to supply the requisite number of sanitary pad packets to all Government, Government-aided schools and KGBVs, as well as identified drug warehouses within the 70 day period

or within the period specified in subsequent tender documents and the final contract. Discussions with District Education officers from Bhadrak, Nuapada, and Debagarh revealed no delays in receiving pads in 2019 and in early 2020, though only two batches of product were ever received since the launch of the scheme. The reasons for receiving only two batches were not known by the District Education Officers. The Khushi scheme was operationalized at the field level only in 2019, and discussions with OSMCL suggested that vendors commenced distribution only in the second half of the year.

If a vendor failed to supply the shipment within the specified timeline, the time lag was reflected in the e-Khushi portal, and had financial repercussions in terms of liquidated damage charges. The cost of transport from the manufacturing unit to the distribution points was borne entirely by the vendor. The vendor incorporated this transport cost and other miscellaneous costs (e.g., insurance) into the financial bid submitted for the tender. At supply points, the batch number and the quantity of products supplied was checked and verified as per the requirement indicated.

School distribution: Distribution of sanitary pad packets in schools was to be done on a quarterly basis, with the vendor distributing the requisite number of pads required to each school based on the enrolment data in U-DISE. KGBVs¹³ also received

¹³ As per KIs, KGBVs existed in 23 districts of Odisha and had 27,000 female students.

pads as they were attached to a Government school. Before the COVID-19 pandemic, KGBVs received stock of sanitary pads under the scheme, though there was uncertainty in terms of the number of batches of pads actually received across KGBVs. Since KGBVs were closed at the time of interviews, the relevant officials were unable to verify records.

In all schools, the scheme was overseen by the Headmaster and the School Management Committee (SMC), who were the nodal persons to receive the quarterly stock by the vendor¹⁴. The Headmaster and SMC identified a nodal female teacher who provided information on menstrual hygiene, sanitary pad use, distributed the packets to girls, and maintained record of stock received, packets distributed, and remaining stock. The nodal teachers in regular schools and in KGBVs were trained on MHM as a part of the Khushi Scheme. The multi-day training focused on the physiology of menstruation, menstrual hygiene practices, and the use of sanitary pads. Social norms related to menstruation were also addressed, with the intent to engender positive attitudes towards this biological process and promote hygienic practices. Details of the Khushi Scheme were also shared. OSMCL representatives working at the district level joined these trainings and provided inputs on the monitoring process for sanitary pad stocks delivered to schools. During distribution of packets to girls, the nodal teacher distributed 3-4 packets of pads to each girl for the quarter. Quarterly distribution was preferred over monthly distribution by teachers to overcome challenges related to irregular student attendance and school closures and holidays, and to ensure more efficient record keeping at the school. The nodal teacher typically maintained a register of the girls eligible to receive the product (Standards 6-12), and marked entries when pad packets were distributed to students for the quarter. The monitoring of distribution was overseen by the SMC.

According to KII in Odisha, the school did not need to inform the district and block drug warehouse or the vendor when stock needed replenishment, as the process of stock distribution by the vendor occurred on a quarterly basis.

Distribution through health facilities and frontline health workers: A small proportion of sanitary pads, both regular pads and pads for post-partum use, were distributed to district and block drug warehouses. Primary Health Centres (PHC), Community Health Centres (CHC), and district hospitals were expected to collect the requisite number of sanitary pads from their designated drug warehouse. This was often done along with collection of other essential medicines and medical supplies/equipment needed by the health facility. Women who had delivered in health facilities were provided with maternity pads at the health centre. ASHA workers also took some sanitary pads to sell at the community level¹⁵. Health facilities and drug warehouses did not need to inform the vendor when the next shipment was due – vendors were responsible for timely supply as per contract terms.

Monitoring of supply and payment to vendors: OSMCL had developed a separate online application for the monitoring of all items procured under its ambit, including sanitary pads. This app was used at the block level. The vendor, once selected, supplied the stock directly to the block drug warehouse. A health official (e.g., Medical Officer in charge) was given with the responsibility of monitoring. He/she monitored the receipt of stock as per the date, the amount of stock received, and amount of stock sent forward to the schools, and balance stock at the warehouse. The name of vendor, the bill or invoice number and other paper work were all maintained. When the vendor completed supply of sanitary pads to a school, the signature of the Headmaster or SMC member was taken on the receipt, which was then submitted to the person in charge at the block level. The entry for completed school distribution was then made. As of 2021, this monitoring of sanitary pad distribution under the Khushi Scheme was transferred to the e-Khushi application.

No advance payment was made to vendors. Payment for the supplied quantity was made in phases on completing minimal supply (e.g., 40% of total supply completed), intermediate supply (e.g., 70% supply completed) and full supply (delivery completed). The

¹³ As per KIIs, KGBVs existed in 23 districts of Odisha and had 27,000 female students.

¹⁴ The Headmaster or SMC may nominate the nodal teacher identified to receive the stock in some schools.

¹⁵ The ASHAs spoken to during the study were unable to share the number of pads they took and distributed at the community level, and were uncomfortable sharing if they maintained any record.

tender document and contract specified if payment was contingent on standard quality test report of samples from each batch that was distributed.

Grievance redressal mechanisms: The nodal teacher was required to note any issues related to quality or quantity of pads received, and reported any issues to the SMC and Headmaster. Any product related issues could be raised during SMC meetings, held every fortnight. The SMC or headmaster then reported any issue to the OSMCL district official. The District Collector also conducted video conferences with Gram Panchayats regularly, and could be informed of any issues with stock receipt or quality. At the time of the interview, no complaints related to quality issues or stock shortages had reached the DSME or OSMCL from any school. OSMCL had not received any reports of quality issues, lack of supplies, delayed supplies from health facilities, prior to the COVID-19 pandemic.

Sanitary pad availability through schools

during COVID-19: During the 2020 COVID-19 lockdown, many school going girls already had sanitary napkins through the school scheme as they received packets for three months. Schools in some gram panchayats that had additional stock were able to provide sanitary napkin support to girls. With continued closure of schools in 2020 and 2021, girls did not receive sanitary pads on a consistent basis. Government officials were keen to restart the scheme and distribution in 2021; however, planned actions may have been interrupted due to the second COVID-19 wave and lockdown in May – June 2021.

Tender specifications

Table 3 below presents a summary of the requirements specified in tender documents for sanitary pads procurement under the Khushi Scheme.

Table 3: OSMCL Tender specifications for sanitary pad vendors

Manufacturer requirements	Odisha Khushi Scheme tenders
Quality standards for sanitary pads as per the Bureau of Indian standards (IS 5405 (1980) and IS 5405:2019 (second revision)	All tender documents refer to IS 5405 (1980)
Manufacturers, importers, suppliers, distributors	Suppliers/distributors who are not manufacturers not eligible to apply for the tender. <i>Imported products permitted</i>
Annual turnover	5 crores in the past 3 financial years (as per 2018 document)
Established capacity to manufacture and supply bulk quantity	Manufacturer should have experience in supplying 25% of the requirement to hospitals/UN agencies/ open market supply in the last 3 years
Manufacturing licence	Manufacturing licence required (for domestic manufacturers)
Testing facilities (to assess quality of product as per established parameters)	Manufacturing licence required (for domestic manufacturers)
Sample products asked for	2 packets of the pad with corresponding certification from the company's own lab or NABL certified lab. Lab report must verify all technical parameters as per IS 5405 (latest version)
GST registration	Required
Supply of sanitary pads to districts/ blocks	Tender documents specify the list of drug warehouses for distribution of stock
Total quantity required	Specified in tender document with a note that the actual quantity may vary, and will be specified in the contract.
Shelf life of products	Three years shelf life required of sanitary pads supplies. When supplied, the product must have minimum 5/6 (83% remaining shelf life). 70% remaining shelf life is acceptable for small batches/imported goods.

In Table 4, the technical specifications for sanitary pads (as specified in tender documents from 2018 onwards and in discussions with OSMCL officials) are placed alongside the sanitary pad quality parameters specified by BIS as per IS 5405:2019. The Khushi Scheme referred to the outgoing standards for sanitary pads, IS

5405 (1980), that will be valid till 2022. Procurement criteria specified all requirements as per the outgoing standards, and were yet to incorporate the additional requirements as per the revised standards, particularly hygiene testing, sampling and conformity, and good manufacturing practice (GMP).

Table 4: Technical specifications of sanitary pads procured

Sanitary pad specifications	Bureau of Indian Standards (IS 5405: 2019 (second revision))	Odisha Khushi Scheme
Type of sanitary pad	Thick napkins (fluff pulp napkins), thin napkins (compressed sheet of absorbent materials in the core)	Type.- Belt-less Sanitary Napkin with wings Pack – 6 per packet
Top cover of sanitary pad	The cover of sanitary napkin shall be of good quality cotton, rayon knitted sleeve or gauze, non-woven fabric or any other materials with sufficient porosity to permit the assembled pad to meet the absorbency requirements. If cotton gauze is used, it shall conform to IS 758	Non-woven top sheet
Size of sanitary pad	Regular (mm): ≤ 210 Large (mm): 211- 240 Extra-large (mm): 241 – 280; XXL (mm): ≥ 281	Overall length (mm): 240 ± 5 Fluff core/pad length (mm): 220 mm± 10
Absorbent core and thickness	Minimum 55 mm	Overall Width (mm): 75 mm ± 5 Overall width with wings: 155 mm ± 5 Fluff core/pad width (mm): 75 mm± 5
		Thickness of a single pad (mm): 9 mm ± 1 Weight of a single pad: No more than 10 gm
Absorbency	Absorb 30 ml of coloured distilled water and it shall not show leakage at the bottom or sides of the sanitary napkin, when tested according to method given in Annex B of IS 5405: 2019	Absorbency: Not less than 50 ml normal saline @ 15 ml per minute
pH value	5.5 to 8.0 when tested by the method given in IS 1390 (cold method).	pH value of absorbent material 6-8.5
Markings	- Markings regarding directions for use and disposal as per Solid Waste Management Rules 2016 - BIS certification marking	OSMCL, NHM, Government of Odisha logos to be on primary, secondary and tertiary packaging. Sanitary pad packet to include messages on use and disposal Date of manufacture and date of expiry to be clearly marked on the packing

Sanitary pad specifications	Bureau of Indian Standards (IS 5405: 2019 (second revision))	Odisha Khushi Scheme
Packaging	Sanitary napkins shall be packed in rigid or flexible packages that protect the product from contaminants during shipment and storage.	Specify packing requirements for primary, secondary, tertiary packaging, and strong packaging
Hygiene testing and biocompatibility	Hygiene testing [tests as per established IS/ISO specified] Biocompatibility Evaluation — Cytotoxicity, Irritation and Skin Sensitization [tests as per established IS/ISO specified] Biodegradability and Compostability (Optional) [as per IS/ISO 17088]	Not specified
Sampling and criteria for conformity	Number of tests and criteria for conformity specified	Limited specification but specific tests and IS not specified
GMP	GMP specified	Not specified

Summary of supply chain process

Table 5 below summarizes the supply chain process for sanitary pads under the Khushi Scheme

highlighting the main activities (as per sequence of events), the key stakeholders engaged, and quality assurance mechanisms.

Table 5: Summary of supply chain under Khushi Scheme

Activity	Stakeholders engaged	Quality assurance mechanism
Initiating procurement and budgetary allocations	Department of School and Mass Education (DSME) Odisha State Medical Corporation Limited (OSMCL)	Formal MoU between DSME and OSMCL for procurement of sanitary pads for distribution to schools
Indenting (estimating need):	DSME for school based distribution National Health Mission (Rashtriya Kishor Swasthya Karyakram and other schemes) for distribution through health services and frontline workers	U-DISE platform for school based distribution
Floating the tender	OSMCL	Public display of tenders Use of electronic platform like e-Khushi for transparency in procurement Odisha is guided by Guidelines on procurement planning and management of drugs and medical consumables for procurement of medical supplies

Activity	Stakeholders engaged	Quality assurance mechanism
Reviewing bids received	OSMCL	All bids are reviewed against detailed tender documents
Issue of contracts	OSMCL	Annual fixed rate contract. All terms and conditions specified
Supply of products	OSMCL Vendor (s)	e-Khushi portal has as a mechanism to track delivery of stock to distribution points, with payment released on producing signed receipt from relevant person at the distribution point in schools and drug warehouses
School distribution	Vendor(s) Headmaster, SMC, nodal teacher	Signing of invoice/receipt at school level
Distribution through health facilities and frontline health workers	Vendor(s) District/block drug warehouse and Medical Officer in charge	e-Khushi portal maintains record of stock delivered at district/block drug warehouse
Monitoring of supply and payment to vendors	OSMCL	e-Khushi's tracking mechanism enables payment only when consignments reach the distribution points, and receipts verifying supply are signed and uploaded on the portal

3.4 Rajasthan Menstrual Hygiene Scheme and free distribution of sanitary pads

Description of the scheme

The Government of Rajasthan launched the Menstrual Hygiene Scheme in 2018, with the aim to improve menstrual health and hygiene, as well as to enhance access to sanitary pads for adolescents girls across the State. The State supported free distribution of pads to girls in schools and out of schools, with support from the Rajasthan Medical Services Corporation Limited (RMSCL).

In 2021, under the Government of Rajasthan's (proposed) budget for the financial year 2021-2022, INR 200 crores were to be allocated to support the free distribution of sanitary pads to all adolescent girls and women of reproductive age across the State, under the IM Shakti Udaan Yojana.

Supply chain process

Procurement - Initiation and budget allocation: RMSCL supported sanitary pad procurement since

2018 (under the Menstrual Hygiene Scheme), to facilitate access to sanitary pads at scale, and to ensure transparency in the procurement process. The demand for sanitary pads under the Menstrual Hygiene Scheme was by the Department of Education (for distribution through schools) and the Department of Medical, Health and Family Welfare (for distribution through ASHAs and health care facilities). The total volume required was estimated through the U-DISE platform for schools, and by the State Director of Public Health, for non-school distribution.

The budget for free/subsidized distribution of sanitary pads was allocated by the Departments of Health and Education. RMSCL played a central role in implementing and monitoring the entire supply chain process from vendor selection to supply to distribution points.

Floating the tender: RMSCL prepared detailed tender documents for sanitary pads, following formats used for medical drugs and equipment procurement, and guided by the Rajasthan Transparency in Public Procurement Act (2012) and Rules (2013). Tender documents outlined all necessary criteria and

requirements for vendor application, selection and assessment. These are detailed in Table 6 and Table 7.

RMSCL placed all tenders in the public domain, in newspapers and on *e-Aushadhi*, the Government of Rajasthan's electronic or online procurement portal, in line with the Government's commitment to transparency in procurement processes. The tender documents specified the approximate quantity of sanitary pad packets required, with the caveat that the exact quantity would be specified every quarter based on demands received from each district.

Reviewing bids received: Once the tender was floated in the public domain, interested bidders were given one month to submit their bid with the required supporting documentation. When the tender closed, the submitted bids underwent a technical review by the Procurement Committee as per the criteria in the tender. This Committee comprised of the Drug Control Officer, RMSCL Pharmacist, Accounts Officer and Accountant, as well as other officials from RMSCL, and the Departments of Health and Education. RMSCL conducted field visits to the manufacturing units to verify the firm's production capacity as well as to assess the quality of the manufacturing process in the factory premises. Each bidder had to submit product samples along with the bid documents. RMSCL had empaneled laboratories (certified by NABL) to test the product samples as per the quality criteria set by BIS.

Once the product samples were tested and found to meet the BIS criteria for sanitary pads, and all bid documents were found to be in order, financial bids were assessed for shortlisted bidders. The financial bids submitted by vendors were inclusive of transportation costs, insurance costs, and other expenses that may be incurred by vendors in the process of manufacturing, packing, transportation and delivery of the sanitary pads. The review of financial bids was conducted methodically, with all requisite permissions and officials in place¹⁶, to guard against any malpractice. Shortlisted vendors who met the assessment criteria and whose financial bids were acceptable were notified on *e-Aushadhi* platform and called for in –person negotiations.

In accordance with the Rajasthan Transparency in

Public Procurement (RTPP) Act, the bidder, who met all eligibility criteria (including the product quality standards), and had submitted the lowest financial proposal for product procurement (lowest cost of product) was classified as L1. The rate for the product was fixed per packet (which comprised six sanitary pads). If the bidder classified as L1 was a firm/manufacturer outside of Rajasthan, and L2 and L3 were Government of Rajasthan supported Micro, Small and Medium Enterprises (MSME), the RTPP Act recommended that if the L2 bidder could match the L1 rate, then the major share of supply would be granted to L2. Such processes aimed to support MSMEs in the State.

The entire tender requirement was never given to one vendor. Typically, the total tender requirement was split between two vendors in a 4:1 (80% - 20%) or 3:2 (60% - 40%) ratio. The tender requirement was specified in the contracts for each selected vendor. This division of the total procurement requirement between two or more vendors helped address challenges related to any limitations in production capacity and supply delivery by any vendor. Such actions also promoted transparency in procurement. Further, in the event that the main vendor (L1) was unable to meet the supply demands, the L2 vendor would be able to meet the shortfall at the same price.

Issue of contracts: RMSCL issued two-year fixed rate contracts to at least two finalized vendors. The total procurement requirement was distributed between selected vendors. The contract noted that if the primary vendor was unable to supply the requirement, RMSCL may change the contract terms to offer L1 status to the L2 or L3 vendor. Contracts issued were two-year fixed term contracts; vendors would be responsible for supplying sanitary pads for a duration of two years. The purchase order was placed on a quarterly basis, and as a result, each vendor typically responded to 7-8 purchase orders during the contract period.

School distribution: School based distribution was under the purview of the Department of Education, that specified the quantity required for each school, every quarter. These estimates were based on U-DISE data. Each selected vendor was provided

¹⁶ Further information on this process was not shared by key informants

a list of selected schools and the quantity to be supplied to each school every quarter. The vendors directly delivered stock to schools. The vendor had to complete delivery of stock to all schools in the district within a stipulated period of the purchase order being placed. Delays of 10 days or more were allowed with financial penalties¹⁷.

Discussions with school girls in two districts of Rajasthan¹⁸ noted some delays in receiving stock in some quarters, and reports of varied pad quality. They were unable to share the duration of delays, simply stating that they were unable to access pads through the scheme for some months of the year, and this varied through the year. They expressed that some pad packets received were of acceptable quality, while other pad packets did not meet their need for adequate absorption and protection. Girls did not report feedback to their schools or to ASHA and anganwadi workers.

Distribution to health centres and anganwadis:

For distribution through health facilities and anganwadis, vendors supplied sanitary pad packets only till the block level (to block drug warehouses). The Department of Health organized for the packets to be collected from the warehouse and distributed them to the gram panchayats and villages through ASHAs and anganwadi workers. Discussions with select ASHAs and ANMs¹⁹ suggested that supplies were available to them, and that they received feedback from the community on the varied quality of pads. However, they did not communicate this information to anyone at the block or district level, as they did not know whom to report to.

Quality assurance during distribution:

RMSCL monitored the quality of sanitary pads in every batch distributed by each vendor every quarter. For instance, if five districts received sanitary pad packets from the same manufacturing batch, pad packets from this batch were randomly selected from each of the districts and sent for testing. Samples for testing were collected at the district warehouse, and then sent to the headquarter in Jaipur for testing by empaneled NABL accredited laboratories. Strict protocols for testing were followed, including

masking of manufacturer's identify before sending samples to the laboratory. This ensured that the testing process was not biased. Details of testing were displayed on the *e-Aushadhi* portal (log in required to access these details). If the sample testing indicated any significant issue with the product, RMSCL could recall all packets of that batch. Instead payment for that entire batch was not made to the vendor, and the vendor or another vendor was asked to meet the consignment requirements at the earliest. Key informants did not share if such incidents had taken place.

Monitoring of supply and payment to vendors:

Products were to be supplied within a minimum of 45 days or a maximum of 90-100 days of receipt of purchase order at the supply points. Monitoring of stock distribution by vendors was done through the *e-Aushadhi* online platform and was integrated with the payment system. The invoice for payment was generated by the *e-Aushadhi* software when the vendor set out for delivery with the requisite requirement for each district. The payment was made when the vendor completed delivery for that district, and submitted all receipts from delivery points at the district warehouse.

On the *e-Aushadhi* platform, each supplier had a unique ID. The portal recorded when the vendor dispatched the requirement, the quantity dispatched, and the delivery points. School delivery points had the name and address of the school, as well as the name of the headmaster. The vendor had receipts, which were to be signed by the headmaster (or any other nodal person appointed for the purpose) on receiving the consignment of pads for that particular school. The vendor submitted these signed receipts at the district warehouse. The in-charge at the district warehouse entered data from all receipts from schools where distribution had been completed on the portal. These entries were matched against the entries for requirement, and verified for completion of delivery. The District Program Coordinator at the district warehouse oversaw this process and ensured data entry and verification. Once verified, payment for that district distribution was made to the vendor.

¹⁷ The key informants did not provide information on the permissible limit for delays

¹⁸ Discussions with school girls was conducted with support from Jatan Sansthan in Dungarpur and Rajsamund

¹⁹ UNPFA Rajasthan team shared contact details of ASHAs to speak with. The WAI team reached out and spoke with five ASHAs and ANMs

Payment to vendors was done through RMSCL. If a vendor supplied stock within the stipulated period, they were eligible for full payment. If the vendor supplied within the extended period (10 days) they bore liquidated damages.

Grievance redressal mechanisms: Schools, and ASHA and anganwadi workers could register quality issues with the product with the official in-charge at the district warehouse. Quality issues were then communicated to RMSCL, and testing of samples from the batch was undertaken. If significant issues were found with the batch, the vendor was either asked to supply a new batch of sanitary pads, or the other vendor was asked to do so.

Delays in deliveries did take place, especially in districts with remote and hard to reach school locations, due to inclement weather, and as a result of COVID-19 lockdowns or mobility restrictions. A grace time of up to 90 days was accorded to

the vendor to complete the supply in challenging districts. During COVID-19 lockdowns, challenges were difficult to overcome due to the uncertainty of supplies.

COVID-19: RMSCL had procured sanitary pads in February 2020, more than a month before the nation-wide lockdown. However, due to the lockdown, supplies were not distributed in schools, health facilities and anganwadis till July 2020 when restrictions eased. Given school closures, ASHA workers supplied sanitary pads through door to door distribution. Key informants were not able to share if the entire stock was distributed, and if there were challenges faced in reaching all those in need.

Tender specifications

Table 6 below presents a summary of the exhaustive requirements specified in tender documents for sanitary pads procurement under Rajasthan Menstrual Hygiene Scheme.

Table 6: RMSCL Tender specifications for sanitary pad vendors

Manufacturer requirements	RMSCL tender documents
Quality standards for sanitary pads as per the Bureau of Indian standards (IS 5405 (1980) and/or IS 5405:2019 (second revision)	Refers to BIS for packing; reference to IS 5405:1980. No reference to IS 5405:2019. Some documents note "valid ISO certification"
Who can supply	Only manufacturers can bid for the tender. Suppliers/distributors are not eligible to apply. <i>Imported products are permitted²⁰</i>
Annual turnover	Not less than 10 crores in the past 3 financial years Not less than 2 crores for MSME units in Rajasthan in the past 3 financial years
Established capacity to manufacture and supply bulk quantity	Manufacturer should have manufactured at least 20% of total one year quantity required in last financial year (5% for MSME unit of Rajasthan)
Manufacturing licence	Manufacturing licence required
Testing facilities	Manufacturing licence required Manufacture to have in house testing facilities (to be verified by RMSCL)
Sample products asked for	12 sample units to be submitted as a part of bid package for testing.
GST registration	Required
Supply of sanitary pads to districts/blocks	Supply to block level; details of block level locations provided (number of anganwadis per block, district specified)
Total quantity required	Quantity specified (3.85 crores in 2018 tender document)
Shelf life of products	Three years shelf life. When supplied, product should have minimum $\frac{3}{4}$ shelf life remaining (75% remaining shelf-life)

²⁰ Imported products formed a part of the total requirement. Imported products may be supplied by a domestic third party vendor.

In Table 7, the technical specifications for sanitary pads (as specified in tender documents from 2018 onwards and as gathered from discussions with RMSCL officials) are compared against the sanitary pad quality parameters r laid down by BIS (IS 5405:2019). The RMSCL tender documents referred

to the outgoing standards for sanitary pads, IS 5405 (1980), valid till 2022. Procurement criteria specified all requirements as per the outgoing standards, and were yet to incorporate the additional requirements as per the revised standards, particularly the hygiene testing and good manufacturing practice.

Table 7: Technical specifications of sanitary pads procured by RMSCL

	IS 5405: 2019	RMSCL tender documents
Type of sanitary napkin	thick napkins (fluff pulp napkins), thin napkins (compressed sheet of absorbent materials in the core)	Type.- Belt-less Sanitary Napkin with wings Pack – 6 per packet
Top cover	The cover of sanitary napkin shall be of good quality cotton, rayon knitted sleeve or gauze, non-woven fabric or any other materials with sufficient porosity to permit the assembled pad to meet the absorbency requirements. If cotton gauze is used, it shall conform to IS 758	Covering (Absorbing top sheet character): Good quality knitted sleeve or non-woven fabric of rash free, non-irritant and soft to touch material which has sufficient porosity to permit the assembled napkin to meet absorbency requirements. The napkins shall have a non-absorbent barrier on one side with adhesive covered by a differently identifiable paper
Size	Regular (mm): ≤ 210 Large (mm): 211- 240 Extra-large (mm): 241 – 280; XXL (mm): ≥ 281	Overall length (mm): 230 ± 5 Core length (mm): 220 mm± 10 Fluff core/pad length (mm): 220 mm± 10
Absorbent core and thickness	Minimum 55 mm	Overall Width with wings (mm): 145 mm ± 5 Fluff core/pad width (mm): 70 mm± 5 Thickness of a single pad (mm): 9-10mm Weight of a single pad: 8.0 - 10 gm
Absorbency	Absorb 30 ml of coloured distilled water and it shall not show leakage at the bottom or sides of the sanitary napkin, when tested according to method given in Annex B.	Minimum Absorbency: 50ml
pH value	5.5 to 8.0 when tested by the method given in IS 1390 (cold method).	pH value of absorbent material 6-8.5
Markings	<ul style="list-style-type: none"> ⚙ Markings regarding directions for use and disposal as per Solid Waste Management Rules 2016 ⚙ BIS certification marking 	Required marking are: <ul style="list-style-type: none"> ⚙ “Rajasthan Govt. Supply- Not for sale QC – Passed” . ⚙ Name of item to be clearly indicated in English and Hindi. ⚙ Additional logos include <i>Beti Padao, Beti Bachao, and Mukhya Mantri Nishulk Dawai Yojana</i> ⚙ Disposal instructions to be printed on packet ⚙ Disposable pouch for each sanitary pad is required ⚙ Pouch/wrapper specifications provided (to be made of biodegradable materials)

	IS 5405: 2019	RMSCL tender documents
Packaging	Sanitary napkins shall be packed in rigid or flexible packages that protect the product from contaminants during shipment and storage.	<ul style="list-style-type: none"> ⚙️ RMSCL specifies packing requirements for primary, secondary, tertiary packaging, and strong packaging ⚙️ Details of batch number, manufacturing date and expiry specified in Rajasthan tender documents
Hygiene testing and biocompatibility	Biocompatibility Evaluation — Cytotoxicity, Irritation and Skin Sensitization [tests as per established IS/ISO specified] Biodegradability and Compostability (Optional) [as per IS/ISO 17088]	Not specified
Sampling and criteria for conformity	Number of tests and criteria for conformity	Exhaustive sampling specified in interviews, with some details for batch testing in tender document
GMP	GMP specified	Not specified

Summary of supply chain process

Table 8 below summarizes the supply chain process for sanitary pads under RMSCL, highlighting the

main activities (as per sequence of events), key stakeholders engaged, and quality assurance mechanisms.

Table 8: Summary of supply chain under Rajasthan Menstrual Hygiene Scheme, conducted through RMSCL

Activity	Stakeholders engaged	Quality assurance mechanism
Initiating procurement and budgetary allocations	Department of Education Department of Health Rajasthan State Medical Services Corporation Limited (RMSCL)	Budgetary allocations made by Departments of Education and Health to support procurement of sanitary pads for distribution
Indenting (estimating need):	Department of Education for school based distribution Department of Health (State Director Public Health) for distribution through health services and frontline workers	U-DISE platform for school based distribution
Floating the tender	RMSCL	Public display of tenders Use of electronic platform like e-Aushadhi for transparency in procurement Rajasthan Transparency in Public Procurement Act (2012) guides all procurement in the State
Reviewing bids received	RMSCL	All bids are reviewed against detailed tender documents

Activity	Stakeholders engaged	Quality assurance mechanism
Issue of contracts	RMSCL	Two year fixed rate contract. All terms and conditions specified.
Supply of products	RMSCL Vendor (s)	e-Aushadhi portal has as a mechanism to track delivery of stock to distribution points, with payment released on producing signed receipt from relevant person at the distribution point in schools and drug warehouses
School distribution	Vendor(s) Headmaster (at schools)	Signing of invoice/receipt at school level Headmaster facilitates distribution through registers maintained of female students
Distribution through health facilities and frontline health workers	Vendor(s) District/block drug warehouse and Medical Officer in charge	Signing of invoice/receipt at drug warehouse Medical officer and district/block drug warehouse in-charge maintains register record of supplies provided to frontline workers
Monitoring of supply and payment to vendors	RMSCL	e-Aushadhi tracking mechanism enables payment only when consignments reach the distribution points, and receipts verifying supply are signed and uploaded on the portal

3.5 Considerations and recommendations for supply chain mediated by State Medical Corporations

Relevance and feasibility of the model	<ul style="list-style-type: none"> ✿ The model is appropriate for large scale distribution of sanitary pads through institutions like schools where estimation of quarterly and annual demand is possible, and distribution can be facilitated in a timely and systematic manner. Distribution outside the school system can be considered, with identified supply points who can provide the product to the intended beneficiaries regularly and through established distribution points (e.g., sub-centre, PHC, anganwadi centre)
Overall considerations for operationalization	<ul style="list-style-type: none"> ✿ Budgetary allocations for procurement to be made annually by the nodal Department leading the menstrual hygiene scheme, with assessments at the end of the year (before the next annual plan) on amount spent, number of beneficiaries reached, and challenges faced in implementation ✿ An agreement or MoU between the nodal department and State Medical Corporation must specify the roles, responsibilities, requirements and budgetary allocations by each stakeholder ✿ State Medical Corporation to have the following systems in place to support supply chain processes for sanitary pads: <ul style="list-style-type: none"> ● Robust and transparent systems for procurement ● Guidelines for transparency and accountability in procurement ● Digital system for facilitating tendering processes, review and selection of bids ● Digital/online monitoring platform to track delivery of consignments to delivery points ● Procedures to guide and track distribution to different supply points (schools and non-school settings) ● Latest Government of India quality standards for sanitary pads (IS 5405:2019) and GMP (for manufacturing units)

	<ul style="list-style-type: none"> ✿ A guidance document to be issued by the nodal department implementing the scheme or by the State Medical Corporation to outline the processes to be followed. This document should be shared with all stakeholders engaged in the process ✿ Contracts with vendors can be considered for two years to enable continuity in services, and prevent time lag that results from annual procurement processes for vendors ✿ Empanelment of two vendors to meet procurement requirement to be considered, particularly for large States, States with remote delivery locations, and States implementing the scheme in schools and non-school locations ✿ School based distribution to plan for distribution of sanitary pads to girls during prolonged school closures and during emergencies (natural disasters and COVID-related lockdowns) ✿ Sanitary pad packets to contain at least eight to ten pads per pack, or a total of 12 pads per month, to facilitate hygienic use. The current trend of providing six pads per pack is insufficient to meet menstrual hygiene needs ✿ Redressal mechanisms and mechanisms for feedback from end users (girls and women), as well as from schools and frontline workers needs to be established ✿ Distribution of sanitary pads through non-school settings to be streamlined, with guidance on estimation of requirement based on anganwadi and ASHA records of out of school adolescent girls
Leadership/ support for the model	<ul style="list-style-type: none"> ✿ The model must be supported by a nodal department that actively engages with other departments to meet needs, and to establish feedback mechanisms on the process and on user experiences ✿ The model can be supported through a working committee comprising representatives from relevant departments (nodal department, State Medical Corporation, and other departments engaged with rollout) to facilitate guidance, coordination, and adequate oversight
Stakeholders to engage	<ul style="list-style-type: none"> ✿ Nodal department (Education or Health and Family Welfare) ✿ State Medical Corporation (for procurement) ✿ Collaborating departments ✿ District officials ✿ District and block level warehouses for supply and storage of stock ✿ School administration and teachers ✿ Medical officers in charge at the district and facility level ✿ Frontline workers – ASHA and anganwadis
Processes involved	<ul style="list-style-type: none"> ✿ Identification of need and scale to determine the total procurement volume, number of vendors required, and supply points ✿ Establishment of process with transparency and quality assurance mechanisms across the supply chain ✿ Procurement process to identify vendors who have products that meet the revised BIS criteria (IS 5405:2019) for sanitary pads, and can submit valid certification ✿ Establishment of supply points and communication of the same to selected vendors ✿ Training of stakeholders at supply points in receiving, storing, and distributing stock, and maintaining records ✿ Training of teachers and frontline functionaries to provide information and education on MHM while distributing products ✿ Monitoring and continued quality assurance of supply chain process and product

Technical support and quality assurance	<ul style="list-style-type: none"> ⚙️ Future tenders to refer explicitly to revised standards for sanitary pads, IS 5404:2019. Any manufacturer claiming products as eco-friendly, bio-degradable, must submit certification that products are compostable as per tests specified in BIS criteria ⚙️ Orientation and technical sessions to be conducted with MSMEs regarding their eligibility to apply for State tenders for sanitary pads, with guidance on quality criteria for pads, support to provide quality certification as per IS 5405:2019, and GMP ⚙️ Orientation to be conducted with all relevant Government stakeholders on the latest Government of India quality standards for sanitary pads (IS 5405:2019), and processes for ensuring timely distribution of quality products to intended beneficiaries
Challenges to anticipate and address	<ul style="list-style-type: none"> ⚙️ Beneficiary feedback on products to be sought on a sample basis to facilitate delivery of quality products that are acceptable to the community ⚙️ Supply of quality products by all selected vendors must be addressed by ensuring routine assessment of products, and seeking beneficiary feedback ⚙️ Anticipating potential interruptions in supply (e.g., emergencies, school holidays), and ensuring timely supply of adequate stock to facilitate continued access to products. Providing additional stock to beneficiaries in anticipation of certain events (e.g., summer holidays) should be considered
Potential to expand the model	<ul style="list-style-type: none"> ⚙️ Potential for State Governments to consider the supply of compostable sanitary pads for large scale distribution

4

Model 2: Supply chain operationalized by decentralized production and community distribution

4.1 Description

This model, in contrast with centralized procurement, was defined by the establishment of local or decentralized production units at the community level, operated by women from the community. Arunachalam Muruganatham and other early entrepreneurs who promoted low-cost sanitary pad production provided a blueprint for this model. The goal of decentralized production was to make sanitary pads locally available, easily accessible, and affordable, while also creating an income stream for women.

Decentralized production and distribution or sale of sanitary pads has evolved over the past decade. Manufacturing machines have improved in their design and operations (for instance, manual, semi-automatic, automatic machines), production capacity (e.g., 2000 pads per day to 20,000 pads per day), and training of women's groups and SHGs for community specific or larger-scale production (e.g., training may be basic or extensive including procurement, marketing and bookkeeping, operations and maintenance).

The National Rural Livelihoods Mission bolstered decentralized production as an income generating activity for women and SHGs, with several States implementing this model at different scales (e.g., across the State in Tamil Nadu, in selected districts in Bihar). In Madhya Pradesh, the Department of Women and Child Development has supported decentralized production under their schemes for women empowerment in selected districts (e.g., the Tejaswi initiative in Dindori).



4.2 Model in action

Table 9: Overview of where model 2 is being implemented across the six project States

State	Model implemented (currently or in the past)
Odisha	Mission Shakti
Rajasthan	Rajasthan Grameen Aajeevika Vikas Parishad supported few SHGs
Bihar	JEEViKA (detailed in report)
Madhya Pradesh ²¹	Tejaswi (detailed in report)
Chhattisgarh	Not implemented
Telangana ¹¹	May be considered in the future given the SHG network

4.3 Government of Bihar's JEEViKA initiative and the Sheikhpura model

Description of the initiative

The Bihar Rural Livelihoods Promotion Society (BRLPS) leads the Bihar Rural Livelihood Project or JEEViKA, that supports a vibrant SHG network. Some JEEViKA districts actively engaged in local sanitary pad production to improve access to and use of safe menstrual hygiene products, and also provided income generation opportunities to members.

A majority of SHGs engaged in small scale production used manually operated or semi-automatic machines to produce pads for local consumption. Jamui and Muzzafapur had manual units, and Begusarai liaised with the Jan Aushadhi centre (keeping in mind affordability and accessibility for women) to make pads accessible to girls and women through JEEViKA members. In Bhojpur district, JEEViKA installed a semi-automated unit producing 15,000 pads per month, using local gram panchayat funds. UNICEF extended training and capacity building support. The District Magistrate sanctioned INR 10 lacs to the project to upgrade to an automated machine to cater to a larger community. A Government official from JEEViKA shared that they were open to considering cloth pad production by JEEViKA in some districts.

Sanitary pad production units operated using manual and semi-automated machines, while responsive to local demands and creating local revenue streams, faced challenges related to repair of machines, procurement of good quality raw materials, quality of pads produced, and the ability to meet increasing demand from the community.

In response to some of these hurdles, JEEViKA partnered with UNICEF and Healing Fields Foundation (HFF) in 2019-2020 in Sheikhpura district to pilot a district wide model for improved access to quality sanitary pads at the community level as well as in educational institutions across the district. This pilot model was being initiated during data collection, and was yet to scale to cover the entire district as intended, due to the limitations imposed by the pandemic. The "Sheikhpura model" is discussed in this report as a prototype for decentralized production with the potential to facilitate district wide access to quality products.

Sanitary pad supply chain

Initiating the supply chain process and budget allocation: The Sheikhpura model was operationalized through a tripartite agreement between three organizations, JEEViKA, UNICEF, and HFF. A detailed MoU between the three partners outlined the financial and non-financial terms of the partnership, as well as the roles and responsibilities of the major stakeholders engaged. The goal to

²¹ Efforts were made to contact State Rural Livelihoods Mission officials in Madhya Pradesh and Telangana, however an interview was not forthcoming.

transition the model to JEEViKA producer groups was clearly noted in the MoU. UNICEF supported the overall implementation of the initiative and advocated with Government to support this model. HFF provided the technical and the initial financial support to establish the pad production unit, and trained SHG members to run the initiative, including production, sales, and book keeping. JEEViKA provided the human resources for the initiative - JEEViKA producers group (comprised of 60 women), and will take over the model once operational.

The process of establishing a district level production unit involved several, often simultaneous actions. The team liaised with the District Magistrate to identify a Government owned building that could support the running of a fully automatic sanitary pad production machine (particularly in terms of physical space required for the machine, storage of raw materials and finished products, and packaging, as well as uninterrupted or regular electricity supply). Once the building was identified for the initiative, JEEViKA supported all renovation work needed to meet the requirements of the production unit.

HFF took charge of the procurement of the production machine both in terms of identification of the fully automatic machine as well as the financing for the machine. HFF drew upon their previous experience to identify the most appropriate manufacturing equipment given field realities, namely that the machine would be operated by semi-literate women in rural areas with intermittent electricity supply, and that machines experienced wear and tear with use. Many imported mid-sized or mid-capacity sanitary pad production machines were difficult to repair in the event of a breakdown as machinery parts were not always available in India, and local technicians lacked the know how to undertake repairs. For HFF, a core consideration for procurement, in addition to production volume, was for all machinery parts to be manufactured in India to avoid time lag in receipt of parts and to facilitate timely operation and maintenance support. HFF identified a vendor in Hyderabad who was able to manufacture the machine as per the needs of the unit, and who provided assurance of regular support for operation and maintenance. Optimal production quantity was set for 45 pads per minute (with total capacity for 60 pads/min), for an average production of 20,000+

pads per day. The cost of a fully automatic machine for this project was between INR 22-25 lacs. The machine produced ultra-thin 280 mm pads (with super absorbent polymer). HFF estimated the cost of production of a single pack of six pads at INR 18-20 per pack.

HFF supported the initial procurement of all raw materials for production and institutionalized the procurement channels for JEEViKA to take over. JEEViKA financed the procurement of raw materials, as these were recurrent costs. The procurement of raw materials for sanitary pad production was challenging as limited vendors provide all the necessary raw materials, quality of raw materials varied across vendors, and guidance to assess the quality of raw materials was limited. To overcome these issues, HFF undertook quality checks against specified criteria for each raw material based on internal research by technical experts and engineers. Further, in line with the tendering process, JEEViKA and HFF identified vendors who could supply all raw materials keeping quality and cost in mind.

HFF provided extensive training to JEEViKA in the following processes: development of the tender document for raw material procurement; assessment of bids received against tender criteria, final selection of vendor; contract development; and release of work orders for raw materials procurement.

Following the procurement process for raw materials, the selected vendor was able to supply all the necessary raw materials (e.g., absorbent core, top and bottom sheets, adhesive). Further, a site visit by JEEViKA and HFF was conducted to review the manufacturing units and to ensure that raw materials met the outgoing BIS standards for sanitary pads, IS 5405 (1980).

Indenting (estimating need): The Sheikhpura model was piloted with the intention to meet the need for sanitary pads in the whole district through JEEViKA members and by supplying pads to all Government and Government aided schools. JEEViKA, UNICEF and HFF together estimated that the machine should be able to produce 3 lac pads a month (50,000 packets). The initial distribution plan for Sheikhpura was to provide 25,000 packets to schools and KGBVs, and 25,000 packets to girls and women in the community in the district.

Supply of products: JEEViKA planned to sell each pad packet at INR 25-26 per pack (price was yet to be finalized at the time of interview). Once schools reopened, supply to Government schools was planned in collaboration with the Department of Education.

Monitoring: HFF developed a mobile application to monitor procurement of raw materials, in-flow of raw materials, sales and distribution (number of packets and money received), as well as challenges faced during the process of procurement and operations. A JEEViKA resource person was trained extensively to use the application and another person was also trained as a back-up. HFF suggested an audit mechanism for JEEViKA to monitor the entire production and distribution process²².

Quality assurance

HFF team trained JEEViKA members on the following:

- ✿ MHM awareness
- ✿ Unit management, operations and maintenance of machines
- ✿ Entrepreneurship training (book keeping/ accounting, finance)
- ✿ Marketing and sales

Select JEEViKA members were trained to manage raw materials, operate machinery, package products, and ensure safe storage. Forty JEEViKA members had been trained to undertake door-to-door sales, and conduct village level meetings to promote the use of hygienic products.

Table 10 outlines the supply chain process for the Sheikhpura model.

Table 10: Summary of supply chain under Sheikhpura Model for district level production and distribution

Activity	Stakeholders engaged	Quality assurance mechanism
Initiating procurement and budgetary allocations	JEEViKA, Government of Bihar UNICEF Healing Fields Foundation	MoU signed between stakeholders clearly outlines roles, responsibilities.
Indenting (estimating need):	JEEViKA, Government of Bihar UNICEF	U-DISE platform for school based distribution Estimation of number of girls and women in the community
Procurement of machine and raw materials	HFF JEEViKA	Detailed research to identify India based machine manufacturer Identification of raw materials vendor to supply all raw materials Check of manufacturing unit
Supply of products	JEEViKA	JEEViKA members trained in marketing and sales of product
Quality assurance	UNICEF HFF	In depth training on JEEViKA members Online monitoring system Audit mechanism established

²² At the time of the interview, these resources were not in the public domain and could not be shared

4.4 Government of Madhya Pradesh Tejaswi initiative

Description of Tejaswi initiative, Dindori

In response to the COVID-19 pandemic, the Department of Women and Child Development, Government of Madhya Pradesh, supported federation level SHGs to commence production of sanitary napkins in October 2020. The unit had a twofold purpose: to generate livelihoods for the SHG federation, and to make sanitary pads locally available in a remote and tribal location such as Dindori.

Through contacts and online searches, the SHG federation members were supported by the District Program Manager to identify vendors for raw materials and machines in Bhopal and Gwalior. A semi-automatic machine was procured from a Gwalior based vendor, with the capacity to produce 3800 pads per day. The vendor also supplied all raw materials, provided support to set up the unit, and provided in-depth training to SHG members to understand and operate the machine. The vendor was available to resolve any operational and maintenance issues. The machine installed produced both regular sized (240 mm) and long pads (280 mm). The pads were assembled into packs of eight each, and were sold at INR 30 per pack for regular size pads, and INR 35 per pack for large size pads.

SHG members sold the pads directly in the community, stocked pads in the Udita corner in operational anganwadis, and planned to supply to schools once they reopened in the district. Since the unit started manufacturing in late 2020, the demand for pads had increased from both girls and women. The second COVID-19 wave in April – May 2021 affected production due to curtailed mobility in the district. Full operations were expected to resume post lockdown.

The unit was not aware of the established standards for sanitary napkins, and was dependent on the vendor to supply quality raw materials and support production of quality pads. The main challenge faced by the unit was intermittent electricity supply,

as reported by the officer in charge. Discussions with anganwadi workers in the district suggested that the cost per packet was perceived as high by girls and women in the community, adversely affecting sales.

4.5 Government of Tamil Nadu's SanFed (Sanitary Napkin Federation) model

The Government of Tamil Nadu drew upon the strength of the State's strong SHG network to increase availability of affordable sanitary pads in rural areas, supported by the State Livelihood Program. The Tamil Nadu Corporation of Development for Women (TNCDW) under the Department of Rural Development and Panchayati Raj established a federation to produce sanitary pads named SanFed, and coordinated the activities of SHGs. Since its establishment in 2017, with a seed fund of INR 20 lakhs, SanFed represented a federation of 60 SHGs across 32 districts of Tamil Nadu. Each SHG comprised 6-12 women from low-income families.

SanFed was the nodal manufacturer providing sanitary pads to the Tamil Nadu Medical Services Corporation (TNMSC) for distribution under the State's Menstrual Hygiene Programme. On receiving orders from the TNMSC, SanFed assigned production to SHGs based on their capacity. These SHGs directly supplied sanitary pads to the District Health Centres under the Department of Public Health and Preventive Medicine. SanFed ensured that SHGs met the outgoing BIS quality standards (BIS 5405 (1980)). The SHGs incurred a production cost of INR 2.5 per pad, and sold each pad at INR 3.5, making a profit of INR 1 per pad. The average income earned by an SHG from government procurement was between INR 30,000 to 40,000 per month. They may have earned additional revenue from commercial sales of the product. SanFed and associated SHGs were instrumental in enhancing awareness and access to sanitary napkins, particularly among populations that had limited access to regular channels of access (e.g., local shops).

4.6 Considerations and recommendations for decentralized production and supply of sanitary pads

Overall consideration	<ul style="list-style-type: none"> ✿ Decentralized production models using fully automated machines (e.g., Sheikhpura) have high upfront costs, take time to establish (do not provide quick results like manual machines), yet are potentially long lasting with larger production capacity, quality assurance, and in-depth training ✿ State Rural Livelihoods Missions have to decide whether to make heavy investments in automatic machines and training of SHG members to enable large scale production (i.e., meeting district level demands) with sufficient returns. Low cost machines (manual and semi-automatic) may not provide this advantage
Relevance and feasibility of the model	<ul style="list-style-type: none"> ✿ States with strong SHG networks, intending to support improved access to good quality, affordable, and locally available menstrual hygiene product, and create a revenue stream for SHGs
Leadership/ support for the model	<ul style="list-style-type: none"> ✿ The model requires a nodal department or program to support the model with clear understanding of the benefits of the model (in terms of improved product access and income generation), and the investments required to initiate and sustain the model
Stakeholders to engage	<ul style="list-style-type: none"> ✿ Nodal State Government Department ✿ Development partner or technical agency (for provide initial technical and financial support) ✿ District authorities ✿ SHG networks ✿ Vendors providing machines, raw materials and O&M support
Processes involved	<ul style="list-style-type: none"> ✿ Identification of need and scale determine the type of manufacturing machine required to meet this need ✿ Identification of vendors who can provide machines who also have the capacity to provide continued operations and maintenance support ✿ Identification of raw material vendors with quality certification as per BIS ✿ Setting up of production unit ✿ Training of SHG members to: <ul style="list-style-type: none"> ● Operate the unit ● Sales of product ● Accounting ✿ Monitoring and continued quality assurance of production processes and products
Technical support and quality assurance	<p>Sanitary pads must meet revised BIS standards, IS 5405:2019. Products claiming additional features (e.g., composability) must be tested as per criteria in IS 5405:2019</p> <p>Areas for technical support:</p> <ul style="list-style-type: none"> ✿ Procurement of quality raw materials ✿ Procurement of manufacturing machine and O&M needs ✿ Quality of manufacturing unit (and sustainability of unit) ✿ Scale of production ✿ Capacity building of SHG members to undertake production ✿ Capacity building of SHG member for marketing and sales ✿ Capacity building of SHG members for monitoring and accounting
Challenges to anticipate and address	<ul style="list-style-type: none"> ✿ Fully automated production units are expensive to establish. The rationale for undertaking decentralized production must be clear, with developed business plan for sustainability
Potential to expand the model	<ul style="list-style-type: none"> ✿ This model may extend well to the production of reusable stitched cloth pads

5

Model 3: Supply chain facilitated through self-help groups for procurement and community distribution



5.1 Description and rationale

Decentralized production of sanitary pads facilitated local access to sanitary pads, yet faced several challenges in terms of production capacity and quality, procurement of raw materials, and operation and maintenance of machines. Some States such as Maharashtra and Chhattisgarh, implemented a model whereby SHG federations and clusters procured pads from vendors, and SHG women actively engaged in distributing sanitary pads at the community level. SHGs were not engaged in the process of manufacturing, and focused only on procurement of the product and sales to the community. SHG members sold pads at a cost that was higher than the procurement cost, and claimed the proceeds. This model served two requirements, income generation for SHG members, as well as community-based and consistent supply of menstrual hygiene products for adolescent girls and adult women.

In this model, a nodal Government Department supported SHGs to procure sanitary pads and sell them directly to girls and women in the community. The Government Department or SHG federation facilitated the identification of vendors, and provided the list of approved vendors to SHG clusters, who in turn contacted vendors to place orders. Once the SHG cluster received the consignment from the vendor, they directly made payments to the vendor. SHGs often used revolving funds to purchase the products from the vendor, or used grants received from the supporting Government Department to purchase the pads. The procured products were distributed to SHG members for sale. SHGs maintained records of the number of packets given the members for sales, as well as the amount sold, and money received.

5.2 Model in action

Table 11: Overview of where model 3 is being implemented across the six project States

State	Model current being implemented
Odisha	Not in operation
Rajasthan	Not in operation
Bihar	Not in operation
Chhattisgarh	Currently being implemented with support from Swachh Bharat Mission-Grameen, Phase 2 in selected districts
Telangana	Not in operation
Madhya Pradesh	May consider this model
Maharashtra (Asmita Plus)	Currently being implemented at scale

5.3 Chhattisgarh: leveraging Swachhagrahis to sell sanitary pads

Background

The Government of Chhattisgarh, under the leadership of and financial support from the Department of Women and Child Development, launched the 'Shuchita' scheme in January 2017 across 20 districts of the State. The scheme installed sanitary napkin vending machines and incinerators across 2022 schools to improve access to affordable menstrual absorbents and disposal options to school going girls. The scheme improved awareness about MHM, and the presence of sanitary pad vending machines and incinerators enabled menstrual hygiene and appropriate disposal practices. Due to limited operation and maintenance to support repairs, and intermittent electricity supply issues, pad vending machines and incinerators broke down and became dysfunctional with regular use. With the change in Government leadership, continued support for the scheme waned.

The Swachh Bharat Mission-Grameen (SMB-G) spearheaded by the Department of Panchayati Raj and Rural Development planned to address menstrual hygiene management in a concerted manner during its second phase (2019 – 2024). The menstrual hygiene initiative under SBM-G Phase 2 focused on providing information on safe menstrual

materials to use, making sanitary pads more widely available to girls and women, and providing safe disposal and waste management solutions.

Under the Suchita Yojana, Chhattisgarh made sanitary pads available to school going girls in schools. The initiative under SBM-G Phase 2 aimed to improve access to sanitary pads for both girls (in school and those out of school) and women at the community level through Swachhagrahis, women SHG members, who played an important role in catalysing community action for sanitation under SBM-G. The Swachhagrahis did not engage in pad production; instead, SHG federation or clusters procured pads from identified vendors, and SHG members acted as sales agents at the community level. Another unique aspect of the Chhattisgarh model was provision of "biodegradable" pads in light of environmental concerns related to disposal of sanitary pads.

Swachhagrahis were identified for sanitary pad distribution given their strong role in SBM-G, their connect with the community, especially with women, and their potential capacity to discuss sensitive issues such as menstruation, sanitary pads use and disposal. This initiative also provided an additional income to the Swachhagrahis and linked with other aspects of sanitation that they worked on, including waste management. SBM-G Phase 2 planned to support this initiative beyond the 12 pilot districts by extending it to all districts in Chhattisgarh.

Supply chain processes

Procurement: Initiation and budget allocation:

Under SBM-G Phase 2, a zero percent revolving fund of INR 60 lacs was provided to each district to support the purchase and sale of sanitary pads. In each district, the amount was shared amongst selected SHG clusters, each potentially receiving INR 15 lacs for procurement of sanitary pads.

SHG clusters were identified for participation in the initiative based on their past performance, ability to manage funds/grants/loans efficiently (in terms of book keeping and fund management), and comprised of women who demonstrated motivation towards the cause. SHG clusters were not selected through a competitive process to receive funds.

Identification of vendors for sanitary pad supply:

Sanitary napkin vendors in Chhattisgarh providing biodegradable pads were identified through State and district level contacts, and not through a tender process. Some contacts were vendors who had previously approached Government Departments with their offerings. Only those vendors providing “eco-friendly” or “biodegradable” pads were considered for the initiative. The contact details of these vendors were provided to SHG clusters for direct procurement. It is not known if State and district officials engaged in this process asked for any certification from vendors claiming to produce biodegradable pads. SHG clusters were unaware of quality certification or quality assurance mechanisms, and did not ask for any related documentation.

A formal tender process with detailed assessment of manufacturers and the product was not undertaken by the Government Department or SHG Federation at the time of the interview as this was a pilot initiative. Based on the success of this pilot, the Department will consider formalizing the process.

Indenting (estimating need): The SHG cluster did not engage in any formal process to estimate requirement of sanitary pads. Discussions with SHG members from Kanker revealed that each cluster procured the number of packets they felt they could sell (based on perceived demand from their communities), and ensured that the requirement was within the available budget. Discussions further

revealed that the SHG cluster in Kanker spent INR 60,000 to procure pads in February 2021, purchasing over 2000 packets.

Issue of contracts: A formal agreement between identified vendors and the Government Department, or the SHG clusters did not exist. In Kanker, where the initiative has been ongoing, SHG clusters purchased PESH Care pad packets for INR 28 (each pack having eight pads) from Suvidha Consulting, a Raipur-based manufacturer of biodegradable pads. The SHG cluster secretary and treasurer maintained purchase records in the accounts register, noting the number of pads bought and the total amount spent. The SHG cluster secretary or treasurer also maintained photo verification of the cheque issued to the vendor on receipt of the consignment.

The manufacturer sent the sanitary pads and packaging (flattened boxes) separately to the SHG cluster office, where SHG members assembled the box of pads themselves. Discussions with SHG members revealed that this was preferred as it enabled easier transportation of the pads to the village.

Supply of products: SHG members sold the box of eight pads at a price higher than what the pads were procured for, between INR 30 – 36 per pack, making a profit of INR 2-8 per pack. There was no set selling price, and SHG members decided the price themselves, and ensured it was at least INR 28 (to recover cost of purchase). Any profit from sales was given to the SHG member, while the base cost of INR 28 per pack was given to the SHG cluster secretary and treasurer. Each SHG member decided how many pad packets she could sell in a month, and took the requisite quantity. At the end of the month or whenever the quantity taken was sold, the SHG member submitted the sales amount to the treasurer.

Discussions with SHG members in Kanker highlighted that girls and women in the community liked the pads, though uptake was limited due to the cost of the pad compared with some low cost variants like Pro-ease that were available in local shops. The pads were perceived to be of good quality, with good absorbency. SHG members noted some barriers to uptake of the pads, including poor levels of awareness on menstrual hygiene and sanitary pad use, and limited understanding of what constitutes a “good pad”. For

instance, girls and women familiar with regular sanitary pads, locally described as “*rooi*” or cotton pads, were unsure of using the SHG sold pads that were thinner (most likely with gel sheet). Girls and women questioned the absorbency of these pads given their perceptions that thicker pads had higher absorbency. This concern was addressed once they purchased the pad and used it, experiencing the absorbency capacity and comfort of the pad. SHG members shared that the challenge was to convince those who did not use pads to use these products. Those who used sanitary pads were open to trying the product sold by them, but would prefer to purchase at a lower price (of no more than INR 25 for eight pads).

Monitoring: The SHG cluster maintained registers to record receipt of products supplied by vendor, and payment made to vendors. Another register kept records of the pad packets taken by each SHG member, the number sold, and the sales money remitted to the SHG cluster. The SHG cluster did not seek feedback on the price at which the pads were sold, and the sales profit made by members. Discussions with SHG members found that each member sold packets at different rates in the villages or gram panchayat she served, based on the paying capacity of girls and women. Some sold a packet for INR 36, making a profit of INR 8 per pack, others sold the pack at its market price of INR 28 or at the most INR 30, making no or limited profit.

Community discussions in three gram panchayats in Kanker and discussions with SHG members highlighted that girls and women preferred other more affordable pads available in the market (e.g., ProEaze or Stayfree). Further, girls were uncertain about the absorbency of the PESH Care pads as these pads were thinner than regular or “*rooi*” pads in the market. SHG members shared that they were unable to communicate the benefits of the PESH Care pads, apart from stressing that the product was biodegradable and hence better for the environment when disposed.

5.4 The Asmita Plus Scheme in Maharashtra: large scale decentralized procurement and distribution

The Government of Maharashtra implemented the Asmita Scheme, currently known as the

Asmita Plus Scheme that promoted awareness on menstrual health and hygiene, and improved access to and use of sanitary pads among rural adolescents. Initially, the scheme supported local or decentralized sanitary pad production to facilitate easy access to low cost pads. However, it faced significant challenges in terms of poor quality pads and complaints from users, and the Scheme was reconsidered. Keeping hygienic use of quality products as the central goal, the program implemented a new model that enabled rural SHGs in the State to procure pads from selected vendors, and distributed the pads to girls and women in the community.

The Asmita Plus Program, with technical support from UNICEF and KPMG, undertook a rigorous vendor identification process, selecting multiple vendors who met the basic BIS criteria for sanitary pads (IS 5405 (1980)) and who would be able to supply the product to SHGs across the State. Informed by user feedback, Asmita Plus program asked selected vendors to modify their pads, particularly in terms of higher absorbency and increased pad length.

SHG groups involved in the Asmita Plus Program were trained to impart MHM awareness at the community level, and promoted and supported hygienic use of sanitary pads. Asmita Plus featured an online application that enabled SHG members to place procurement orders to vendors, enter receipt of the consignment from the vendor, make and track payments, allocate stock among SHG members and monitor distribution. HDFC Bank and Bank of Baroda supported the development of its mobile application.

SHG members estimated demand from the community from the number of adolescents present, and the number of women who typically used pads. The community requirement was pooled at a cluster level to initiate the procurement volume. Once the stock was received, SHGs were given the requisite amount for distribution/sales. Before the COVID-19 pandemic and school closures, pads were distributed to schools as well. During the pandemic, Asmita SHGs played a vital role in ensuring supply of pads to girls and women in the State when other supplies were severely restricted, and contributed to relief efforts.

5.5 Considerations and recommendations for supply chain through SHGs procurement

Overall consideration	<ul style="list-style-type: none"> ✿ The menstrual hygiene products procured and distributed must be competitive and advantageous in terms of price and quality with other products that are available in local markets. If priced higher than locally available products, the model will not be sustainable.
Relevance and feasibility of the model	<ul style="list-style-type: none"> ✿ States with strong SHG networks, intending to support improved access to good quality, affordable, and locally available menstrual hygiene product, and create a revenue stream for SHGs.
Leadership/support for the model	<ul style="list-style-type: none"> ✿ Requires a nodal Department or program to support the model with clear understanding of the benefits of the model (in terms of improved product access and income generation), and the investments required to initiate and sustain the model.
Stakeholders to engage	<ul style="list-style-type: none"> ✿ Nodal State Government Department ✿ District authorities ✿ SHG networks ✿ Vendors providing sanitary pads
Processes involved	<ul style="list-style-type: none"> ✿ Identification of vendors manufacturing quality sanitary pads (ideally through a robust procurement process) ✿ Setting up of the model for procurement by SHG Federation or cluster, receiving consignment, and distribution to SHG members for direct sales in the community. ✿ Capacity building of SHG Federation and/or clusters to undertake robust procurement, and develop distribution plan. ✿ Orientating SHG members to sell the product ✿ Monitoring and continued quality assurance of product
Quality assurance	<ul style="list-style-type: none"> ✿ Sanitary pads must meet BIS standards, IS 5405:2019. Products claiming additional features (e.g., composability) must be tested for as per criteria in IS 5405:2019. ✿ The Department implementing the scheme must conduct a rigorous procurement process to identify and empanel vendors who will supply sanitary pads to SHGs. Procurement criteria must include quality specifications for the product, as well as criteria to assess manufacturer's capacity for production, capacity to produce volumes required, previous history of production for mass distribution, capacity to transport pads to locations, and cost per packet. The products manufactured by identified vendors must be tested as per IS 5405: 2019 before empanelment. Vendors claiming additional advantages, such as biodegradability, must provide quality certification of the same as per IS 5405 criteria for compostability from a NABL certified laboratory.

Technical support	<p>Areas for technical support:</p> <ul style="list-style-type: none"> ✿ Procurement of quality pads as per IS 5405:2019 ✿ Capacity building of SHG Federation/cluster to undertake procurement ✿ Capacity building of SHG member for marketing and sales, and to highlight the benefits of the pad (especially if compostable pads are being distributed) ✿ Capacity building of SHG members for monitoring and accounting ✿ Redressal mechanisms must be established that allows SHGs to provide feedback to vendors regarding product quality. ✿ The parent scheme or nodal department implementing the scheme should establish feedback mechanisms to seek user experiences and perceived benefits of the product, as well as the advantage of the model for SHG groups. This will determine the viability and sustainability.
Monitoring	<ul style="list-style-type: none"> ✿ Monitoring of vendor procurement and payment can be done using written or manual records as well as an online application. Manual records can be maintained well, with a separate register for entries related to procurement, receipt of consignment, and payment to vendors (including check details, online transfers, or cash payments). A separate manual record (separate register) should be maintained for distribution of stock among SHG members, and money received from sales.
Potential to expand the model	<ul style="list-style-type: none"> ✿ This model may be applied to reusable stitched cloth pads and menstrual cups. For menstrual cups, additional in-depth training will be required to initiate the new product and support use.

Conclusion and recommendations to strengthen supply chain of menstrual hygiene products for Government schemes

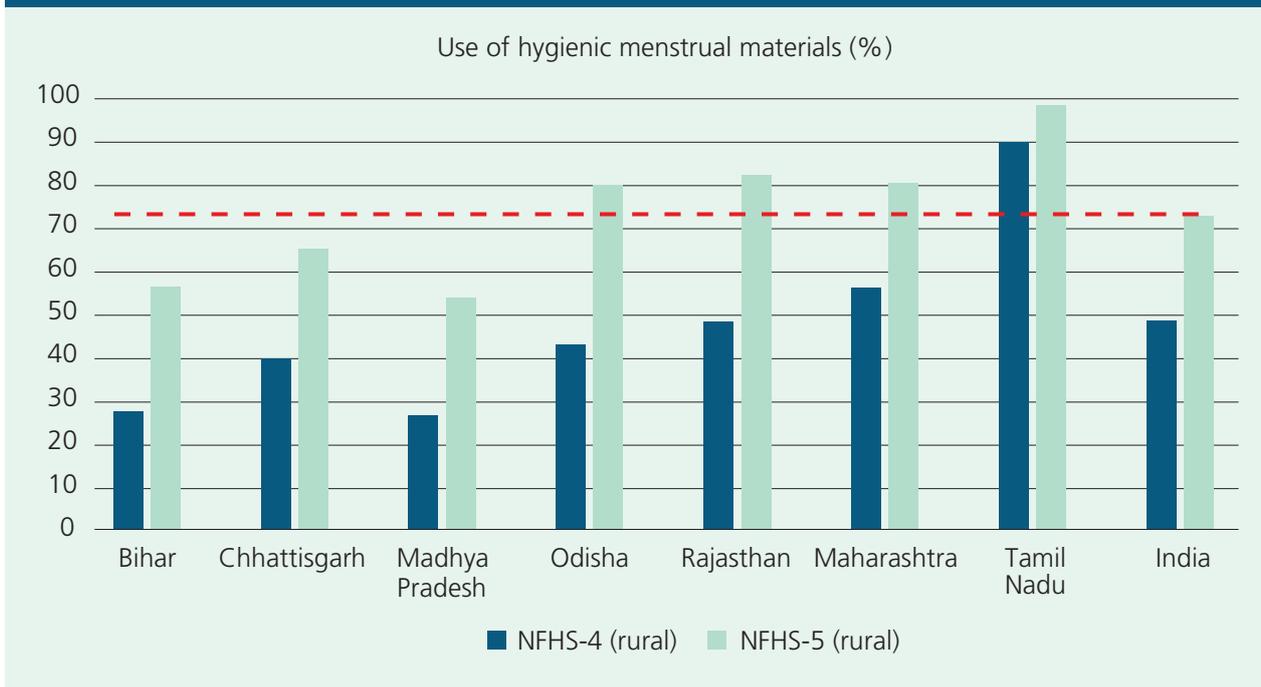


6.1 Conclusion

Greater attention to menstrual hygiene management has catalysed action to make safe and hygienic menstrual materials more available, accessible and affordable to girls and women. The result of these efforts was partially reflected in the tremendous progress made in the usage of hygienic materials by young women in India, particularly those living in rural areas. The two rounds of NFHS conducted in 2015-16 (NFHS-4) and in 2019-2020 (NFHS-5) clearly highlighted that more young women are using hygienic menstrual materials than ever before. The figure below presents the progress (with a focus on usage among the rural population) made by States featured in this report. The figure shows that in these States, a markedly higher proportion of young women from rural areas were using hygienic materials (mostly sanitary pads²³). Bihar, Odisha and Rajasthan made the most progress, closely followed by Chhattisgarh, Madhya Pradesh, and Maharashtra. However, usage among the rural population in three States (Bihar, Chhattisgarh and Madhya Pradesh) remained below the national average, while usage rates in the other four States (Odisha, Rajasthan, Maharashtra, Tamil Nadu) superseded the national average (represented by the red dotted line). Therefore, efforts to improve access to and use of safe menstrual materials needs to be sustained and intensified in all States, and especially in States that are yet to meet the national average, to support good menstrual health for all those who experience menstruation.

²³ NFHS considers sanitary pads as the primary hygienic menstrual material.

Figure 2: Use of hygienic menstrual materials by young women (15-24 years) in selected States using NFHS-4 and NFHS-5 data



Several factors contributed to greater use of sanitary pads in India in general and in the States in this report (for instance market growth and diversification, Government initiatives on awareness and product access, civil society campaign efforts and interventions). Yet the catalytic role of Government initiatives in

supporting access and hygienic use in rural areas, especially for poor and marginalized populations cannot be undermined, and must be supported and strengthened moving forward. Table 12 summarizes and compares the three supply chain models for sanitary pads covered in this report, and that are prevalent in India.

Table 12: Summary of supply chain models for sanitary pads through State Government Schemes

	Model 1: Supply chain mediated by State Medical Corporations	Model 2: Supply chain operationalized by decentralized production and community distribution	Model 3: Supply chain facilitated by Self Help Groups (SGHs) for procurement and community distribution
Brief description	<ul style="list-style-type: none"> A nodal Government Department spearheading the scheme, partnered with the State Medical Corporation for large scale procurement of sanitary pads. 	<ul style="list-style-type: none"> SHGs established local manufacturing units (at the village/Gram Panchayat level, or at a block or district level), and were trained to manufacture sanitary pads, manage manufacturing (e.g., procurement of raw materials), and on marketing, sales and book keeping 	<ul style="list-style-type: none"> SGHs did not engage in the manufacturing process. Instead they procured sanitary pads from identified vendors, and sold them in the community

	<ul style="list-style-type: none"> ✿ The State Medical Corporation oversaw the entire procurement and distribution ✿ Selected vendors directly supplied to supply points identified by the Government ✿ Schemes typically allocated funds for one year, and at times for two years. Vendor contracts were made accordingly 	<ul style="list-style-type: none"> ✿ SHG members sold sanitary pads to girls and women in the community ✿ SHGs received financial support from a State scheme (e.g., National Rural Livelihoods Mission) for decentralized production and distribution ✿ Unclear if fund allocation was done annually 	<ul style="list-style-type: none"> ✿ SHGs received financial support from a State scheme (e.g., SBM-G) for decentralized procurement and distribution
Estimation of procurement volume	<ul style="list-style-type: none"> ✿ School focused distribution schemes used U-DISE data to estimate need for a year, and estimated procurement volume accordingly. 	<ul style="list-style-type: none"> ✿ No specific data set was used to estimate procurement need 	<ul style="list-style-type: none"> ✿ No specific data set was used to estimate procurement need
Type of distribution	<ul style="list-style-type: none"> ✿ This model typically supported free distribution of sanitary pads for school going girls in Government, and Government aided schools, and highly subsidized sales for out of school populations. Schemes tended to be large, covering several districts or the entire State ✿ A component of the scheme covered adolescent girls and adult women in non-school settings through health care centres and anganwadis 	<ul style="list-style-type: none"> ✿ SHGs sold sanitary pads at a subsidized rate or at a market competitive rate to girls and women in the communities they served. They may also supply to Government schools and health care facilities (but this was not well established) 	<ul style="list-style-type: none"> ✿ SHGs sold sanitary pads at a subsidized rate or at a market competitive rate to girls and women in the communities they served. They may also supply to Government schools and health care facilities (as seen in Maharashtra)
Products distributed or sold through existing schemes	Sanitary pads	Sanitary pads	Sanitary pads

<p>Advantages of the model</p>	<ul style="list-style-type: none"> ✿ Facilitated fairly accurate estimation of need and procurement volume ✿ Active involvement of and oversight by State Medical Corporation ensured rigorous and transparent supply chain process, with some attention to quality assurance of products ✿ Supported regular supply of pads to educational institutions, health facilities, with adequate fund allocation on an annual basis ✿ Used established monitoring processes, particularly digital systems, to streamline supply chain processes after procurement 	<ul style="list-style-type: none"> ✿ Sanitary pads were made locally and thus easily available to all community members in need. The model could potentially address access related constraints, especially during emergencies when external supplies were limited ✿ Sanitary pads were available to all girls and women who wished to purchase the product, and not limited to adolescents and/or school going girls ✿ Potential livelihood opportunity for women in general, and SHG members in particular 	<ul style="list-style-type: none"> ✿ Sanitary pads were procured locally and thus easily available to all community members in need. The model can potentially address access related constraints, especially during emergencies ✿ SHGs did not have to invest in establishing manufacturing units, and on training for operation and maintenance, and could focus on distribution and sales ✿ Sanitary pads were available to all girls and women who wish to purchase the product, and not limited to adolescents and/or school going girls ✿ Potential livelihood opportunity for women in general, and SHG members in particular
<p>Challenges</p>	<ul style="list-style-type: none"> ✿ Focus often on school going adolescent girls; adult women and out of school girls may find it difficult to access pads through the initiative ✿ Centralized procurement ran the risk of delays in consignment deliveries (especially to remote areas) ✿ Lack of awareness of product standards for procurement could affect the procurement of quality products ✿ Inadequate monitoring of supply chain processes, product quality, and grievance redressal mechanisms could result in poor quality products reaching intended beneficiaries, and could undermine hygienic use 	<ul style="list-style-type: none"> ✿ The model was limited in its scale, and typically catered to a small population located in the same or nearby geography as SHG manufacturing units ✿ SHGs running production units may be unaware of product standards and GMP to be followed; hence products produced may be of poor quality, and not meet the needs of the population ✿ SHG members were typically trained to operate machines, yet received little training on marketing and sales, and book keeping. They faced challenges in ensuring sales of products produced 	<ul style="list-style-type: none"> ✿ The model was limited to areas where SHGs were active, and catered to only those populations ✿ SHGs may sell the procured pads at a competitive price or at a cost higher than pads available in the market, and experience challenges in sales ✿ SHGs that have not received training to understand and assess product quality face challenges in procuring high quality products ✿ SHG members lacking training on estimating community demand for sanitary pads risked procuring volumes that may not be sold

	<ul style="list-style-type: none"> ✿ Free distribution schemes may be supported by State Governments for a limited period, and may conclude with change in Government, shift in Government priorities ✿ Any product distribution scheme without a complementary awareness or education component risked challenges in terms of facilitating hygienic use of the product 	<ul style="list-style-type: none"> ✿ SHG produced products were often priced similarly to commercially available products, but may be perceived as being of poorer quality. This undermined their uptake ✿ The high cost of fully automatic machines (with higher capacity for production of better quality of pads) impeded their installation in many areas ✿ While fund allocations were for the establishment of production units, adequate funds for continued procurement of raw materials, operation and maintenance of machines, and regular training of SHG members may be lacking. These budget gaps could undermine production in the mid and long-term ✿ Any product distribution scheme without a complementary awareness or education component risked challenges in terms of facilitating hygienic use of the product 	<ul style="list-style-type: none"> ✿ Without a production unit, SHG members faced hurdles in storing sanitary pad stocks procured, potentially placing the stock at risk for damage ✿ Any product distribution scheme without a complementary awareness or education component risked challenges in terms of facilitating hygienic use of the product
<p>Where the model can work</p>	<ul style="list-style-type: none"> ✿ The model works well for large scale schemes that focus on free distribution to a focus population (e.g., school girls) ✿ The model needs substantial multi-year financial allocations, with clear stewardship from a nodal Government department 	<ul style="list-style-type: none"> ✿ The model works where SHG groups are well established, and have the capacity to undertake manufacturing and sales of quality products at the community level ✿ The model needs financial allocations for the establishment of production units, as well as adequate annual financial support for raw materials, operation and maintenance support, and quality testing 	<ul style="list-style-type: none"> ✿ The model works where SHG groups are well established, and have the capacity to undertake procurement and sales of good quality products

	All products procured and distributed must meet BIS standards IS 5405:2019 Products claiming compostability, biodegradability or labelled as “eco-friendly” must provide certification as per standards		
Good practices from States	<ul style="list-style-type: none"> Odisha Khushi Scheme has a specific e-Khushi portal that facilitates tracking of the supply chain process 	<ul style="list-style-type: none"> The Sheikhpura model being piloted with JEEViKA in Bihar has the potential to demonstrate a district wide approach under decentralized production 	<ul style="list-style-type: none"> SBM-Grameen Phase 2, Chhattisgarh has emphasized the need for sanitary pads that are environmentally safe through their focus on bio-degradable pads
	<ul style="list-style-type: none"> Rajasthan’s procurement process ensures transparency by following guidelines established by the State Government 	<ul style="list-style-type: none"> SanFed, Tamil Nadu has demonstrated how SHGs can be trained to produce quality products for wide scale distribution and sales, and for Government procurement 	<ul style="list-style-type: none"> Asmita Plus, Maharashtra has demonstrated how SHGs can be capacitated and leveraged to effectively procure and sell sanitary pads at scale

6.2 Recommendations to strengthen supply chain for menstrual hygiene products under Government initiatives

The insights from this study suggests that while supply chains for menstrual materials, specifically sanitary pads, do exist for State Government Schemes on menstrual hygiene, overarching guidance is needed to facilitate the selection of the most appropriate model or models for product access to ensure wide-spread and sustained access to affordable and quality menstrual hygiene products.

Salient recommendations for Government stakeholders engaged in the supply chain are presented here:

Selection of appropriate supply chain model

States seeking to improve access to menstrual hygiene materials, specifically sanitary pads, through initiatives that makes materials available to girls and women, need to consider the following when selecting an appropriate model:

- Status of the use of hygienic menstrual materials by adolescents and women (e.g., proportion of adolescents, women using hygienic menstrual materials to manage menses)

- Rationale for and objectives of the initiative (e.g., to improve access to hygienic menstrual materials, to improve hygienic use of menstrual materials)
- Leadership for the model, and budgetary allocations
- Duration of the scheme
- Potential for collaboration with other Government departments and stakeholders for rollout
- Sustained access to menstrual materials beyond the scheme period

At the national level

- Develop guidance to inform the selection and operationalization of appropriate supply chain model(s) for States based on:
 - The objectives, duration, coverage and budget of the MHM scheme (existing and proposed)
 - Capacity for centralized procurement, decentralized procurement, decentralized production
 - Existing institutional structures or mechanisms to support the supply chain in the State (e.g., strong State Medical Corporations, vibrant Rural Livelihoods Program and SHG networks)
 - The type of product(s) to be distributed and/or sold

- Free distribution or sales (even if subsidized) or a mix of both
- Distribution channels to be leveraged (schools, health facilities) and frontline functionaries to be engaged (ASHAs, anganwadi workers, SHGs)
- Capacity building of distribution agents to provide information and education alongside product distribution or sales

✿ National guidance to specify recommendations for the following:

- Basket of products:
 - ◆ Procurement of menstrual hygiene products to be expanded to consider a basket of products including reusable menstrual materials such as reusable cloth pads and menstrual cups, in addition to disposable sanitary pads
 - ◆ Procurement to consider including reusable and disposable products manufactured by small and medium enterprises in States
 - ◆ Supply chain to consider procurement from multiple vendors (who have appropriate certification for manufacturing and for product quality standards)
- Adherence to established (and where relevant, updated) quality standards for menstrual hygiene products:
 - ◆ Dissemination of latest quality standards for disposable sanitary pads established by BIS, IS 5405:2019, to all stakeholders engaged across the supply chain (including State Departments, district officials, development partners, community groups engaged in the supply chain process, manufacturers), and capacity building of relevant stakeholders to implement and support adherence to quality standards
 - ◆ Practical guidance to State Governments on adherence to quality standards (which tests to do, where to test products for compliance with basic minimal standards as per BIS). Government procurement of products

whose manufacturers claim additional properties (e.g., compostable, biodegradable products) will need manufacturers to submit certification to verify claims as per established BIS standards

- Update the GeM portal in accordance with the updated BIS standards for disposable sanitary pads, and new standards for reusable cloth pads and menstrual underwear

At the State level

- ✿ Operational plans for the menstrual hygiene supply chain process adopted in a State must include:
 - Rationale for the supply chain model(s) selected or implemented
 - Reach, duration of scheme, and budget required
 - Roles and responsibilities of stakeholders engaged across the supply chain from the State level to the distribution points)
 - Basket of products to be provided along with quality criteria for the selected product categories in accordance with BIS:
 - ◆ List of NABL certified laboratories for testing products as per BIS standards
 - ◆ List of small and medium enterprises in the state that manufacture menstrual hygiene products and list of companies/ manufacturers making or supplying alternative products
 - The supply chain process with activities, actors and quality assurance mechanisms
 - Training plan and content for stakeholders engaged across the supply chain on the supply chain process and quality assurance mechanisms
 - Streamlined supply chain through existing digital platforms (e.g., *e-Aushadhi* platforms, GeMs) or through digital platforms established for the scheme (e.g., *e-Khushi* in Odisha, digital monitoring of *Asmita Plus* in Maharashtra)
 - Feedback and grievance redressal mechanisms for direct beneficiaries and functionaries at distribution points (e.g., teachers, ASHAs, Anganwadi workers, SHG members)

At supply distribution points

- ❁ Capacity building of stakeholders engaged in direct distribution and/or sales to girls and women on:
 - Managing the distribution and/or sales of the products to ensure timely disbursement to beneficiaries
 - Quality assurance of products (check for product expiry, damage to packaging or products, quality of pads)
 - Monitoring of receipt and distribution of stock, and book keeping
 - Establishing feedback and grievance redressal mechanisms for direct beneficiaries, and communicating critical issues related to timely product availability and quality to concerned stakeholders in a timely manner
 - Providing information and education on menstrual hygiene management, supported by relevant IEC materials

Evidence needed on the following

- ❁ Effectiveness of decentralized production models in enhancing access to quality products and providing sufficient livelihoods for those engaged in the process
- ❁ Perceptions, experiences and preferences of end beneficiaries (girls and women) with regard to the products distributed

- ❁ Role, responsibilities and experiences of teachers, frontline workers, and SHG members in distributing and selling sanitary pads, and areas for capacity building

The three models identified through this study represent predominant and good supply chain practices in India. Each model has specific strengths that have been highlighted in the report. To successfully meet the goal of universal access to safe and hygienic menstrual materials, the operationalization of each model must be undertaken bearing in mind the salient points listed in this section. Specific recommendations for each model are presented as considerations at the end of the section describing that model. Irrespective of the supply chain model selected for implementation, the product(s) selected must meet BIS standards (IS 5405:2019) and be subjected to regular testing to ensure that quality products reach girls and women. Further, while the models outlined here seek to facilitate short-term and mid-term access to hygienic menstrual materials, sustained access to good quality and affordable products must be considered. Lastly, product access must be accompanied by communication on hygienic use of materials and support for safe and appropriate disposal.

ANNEXURE 1: INTERACTIONS WITH STAKEHOLDERS FOR THE STUDY

State	Government officials (number)	Non-Government stakeholders (number)	Frontline workers (ASHA, ANM, anganwadi worker, SHG) (number)	Community interactions (number)
Odisha	5 (State level) 3 (district level)	4	5	-
Rajasthan	2 (State level)	5	5	3
Madhya Pradesh	5 (State level) 1 (district level)	2	2	-
Bihar	2 (State level)	2	6	4
Chhattisgarh	3 (State level) 2 (district level)	4	25 (group discussion)	4
Telangana	4 (State level) 1 (district level)	1	-	-

