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The Changing Roles and Reputations of Dais in Rural Uttarakhand: An Investigation into the Maternal Health Services of Villages in Okhalkanda Block in Nainital

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3 ABSTRACT

The *dai*, once a prominent figure in Indian maternal health, now faces marginalization as the government of India adopts the goal of universal institutional delivery. Under pressure from international discourse that Skilled Birth Attendants (SBAs) were more effective at lowering Maternal Mortality Rate (MMR) than Traditional Birth Attendants (TBAs) like *dais* (World Health Organization), *dai* training was discontinued and left in the hands of NGOs, while concurrently women and ASHAs were monetarily incentivized for every institutional birth (Park, 419). Yet in rural, isolated, or hilly areas like Okhalakanda block in Uttarakhand, institutional delivery is a long way from universal—only 37% of all deliveries occur in a hospital (Aarohi Arogya Project). The harsh realities of being a woman in an isolated Kumaoni village contribute to the backward motivations of home deliveries: women often have low self-determination, must return to work quickly after giving birth, and are not well included into many government services (Capila). They fear the hospital for its cesarean sections and long recovery periods from stitches, feel pressure from mother-in-laws who called on *dais* in their day, and often do not receive effective counselling about proper ANC, PNC, and institutional delivery. Yet safe and hygienic delivery are the right of every woman—disregarding home deliveries and *dais* puts the onus on the woman to get to the hospital in order to receive proper services and counselling. In reality, social and logistical factors can impede a woman's ability or desire to delivery in a hospital. While *dai* training can seemingly endorse home delivery, it is the only way to improve the health outcomes of the women who are left out of the government 'universal' institutional delivery services. The findings recommend that *dai* training furthermore should focus on including them and their clients in government health services and tracking, as well as filling the counselling gap that the outreach efforts of ASHAs and ANMs have been unable close.

4 GLOSSARY OF ABBREVIATIONS AND ACRONYMS

ANC – Antenatal Care / Antenatal Counselling

ANM – Auxiliary Nurse Midwife

ASHA – Accredited Social Health Activist

AYUSH – Ayurveda, Yoga, Unani, Siddha, Naturopathy, Homeopathy

BPL— Below the Poverty Line

CCT – Conditional Cash Transfer

CSSM – Child Survival and Safe Motherhood

HPS – Higher Performing State

IFA – Iron and Folic Acid

IMR – Infant Mortality Rate

JSSK – Janani-Shishu Suraksha Karyakaram

JSY – Janani Suraksha Yojana

LPS – Lower Performing State

MCTS – Mother and Child Tracking System

MDG – Millennium Development Goal

MMR – Maternal Mortality Rate

MMU – Mobile Medical Unit

NGO – Non-Governmental Organization

NRHM – National Rural Health Mission

PHC – Primary Health Centre

PNC – Postnatal Care / Postnatal Counselling

RCH – Reproductive and Child Health

SBA – Skilled Birth Attendant / Skilled Birth Assistant

TBA – Traditional Birth Attendant / Traditional Birth Assistant

TT – Tetanus Toxin

5 HINDI GLOSSARY

Dai – **दाई**

Guni – गुणी

6 INTRODUCTION

In the isolated hilly villages of rural Uttarakhand, women known as Traditional Birth Attendants (TBAs), known colloquially in India as *dais*, historically conducted most deliveries. These *dais*, originally acknowledged as necessary and important health providers in the majority of India's villages, now face marginalization from the government and "mainstream" culture, which favor the modernization of obstetrics (Advisory Group on Community Action). Previously, the Indian government has provided *dai* training to improve hygiene practices in birth and lower the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR); however, this program failed in its aim to have a trained *dai* for every one thousand people (Park, 417). With the foundation of the National Rural Health Mission (NRHM) in 2005, improved primary health care gradually became more accessible to the 70% of Indians who live in rural areas, and from this increased accessibility to hospitals came a trend of increased institutional deliveries (Park, 412). Additional government incentives such as Janani Suraksha Yojana (JSY) and Janani-Shishu Suraksha Karyakaram (JSSK), instituted in 2005 and 2011 respectively, rewarded mothers for fulfilling certain steps in acquiring antenatal care (ANC) and getting an institutional delivery. These incentive plans were created with the intention of achieving 100% of births in institutions (Park, 419-20). At the end of the 20th century, discourse circulated about the ineffectiveness of training *dais* to lower MMR, and under pressure from international bodies, the National Reproductive Child Health (RCH)-II Programme excluded *dais* as skilled birth attendants (Ministry of Health and family Welfare). This subsequent marginalization of *dais* included not only encouraging women monetarily to avoid their services, but more importantly included a gradual halt of the training program and provision of *dai* kits.

This study will report on the changes this marginalization has had upon *dais*' role and reputation in the village. It will additionally detail the current demand for *dais*' services, as well as the state of fulfilling the promise of a safe and hygienic delivery for every woman. It will furthermore investigate the role of institutional delivery in including mother and child in the greater health system provided by the

government through antenatal and postnatal care and counselling. While there are no definitive answers regarding the recommendation of institutional or home birth, it is clear that much work is to be done. The recommendations will show the necessity of greater involvement of *dais* in the NRHM model, so as to provide safe delivery for all—not simply the women who are able to deliver at a hospital. This study will not seek to romanticize traditional methods or uphold institutional preference, but rather claim that clean delivery, whether at home or in the hospital, must remain to be a primary right of women in India. Subsequently, inclusion of women and children into the government health services must be guaranteed regardless of place of birth or type of attendant.

7 BACKGROUND

7.1 HISTORY OF DAIS AND GOVERNMENT RECOGNITION

Dais have been a staple of Indian childbirth practices for millennia—their wisdom handed down through generations of women. Traditional ways of birth, though recently marginalized, are claimed to be more natural. Additionally, home deliveries can have the following advantages:

> (1) the mother delivers in the familiar surroundings of her home and this may tend to remove the fear associated with delivery in a hospital, (2) the chances for cross infection are generally fewer at home than in the nursery/hospital, and (3) the mother is able to keep an eye on her children and domestic affairs. (Park, 489)

Dais are Traditional Birth *Attendants* or Traditional Birth *Assistants*. In a normal, healthy birth, they do relatively little, merely attending to or assisting the natural process of birth, cutting the umbilical cord, and occasionally supporting the perineum to prevent tears. In cases of prolonged labor, *dais* feed women traditional foods to keep up their energy levels and encourage women to walk around to encourage labor (Capila, 143). D*ais* are knowledgeable about massages that position the child correctly or that expel a placenta that is not being delivered normally (Capila, 145). In rural Rajasthan, some *dais*

are also *gunis*, and have extensive knowledge of herbs that can be used to treat women's health problems ranging from sexually transmitted infections and urinary tract infections to infertility and attempting proper child spacing.

In recent years, modernization of obstetrics has occurred, primarily westernizing the approach to childbearing. Modernization of all medical fields has taken place upon pressure from governing international bodies that claim modern methods are the truly safe and effective way to attain health. This modernization of healthcare not only marginalizes traditional wisdom that has been refined and passed down through generations, but also diminishes the ability of people to heal themselves (Capila, 6). Instead of traditional wisdom of health enduring, people are now reliant on doctors and nurses trained elsewhere and brought to their communities. This modernization of health threatens villages' self-sufficiency and independence, as well as the self-esteem of its people; "it tends to mystify and to expropriate the power of the individual to heal himself and to shape his or her environment maintenance" (Capila, 6). Though the Indian government supports AYUSH medical practices in most areas of health, childbirth is not one of these areas. In all cases of delivery, modern practices rather than traditional practices are recommended; this is because in cases of emergency, hospitals are the only places well-equipped to handle the crisis (National Rural Health Mission). This threat of emergency ultimately labels the hospital as the "safe" delivery location and claims the home is unsafe and unsuitable for birth.

Previously, the Indian government provided training and compensation to *dais* with the goal of establishing one trained *dai* per village under the Child Survival and Safe Motherhood (CSSM) component of the RCH-I Programme (Park, 415).

> Tradtional Birth Attendant still plays an important role during deliveries in our society. Under the CSSM programme, d*ai* training was a uniform country-wide activity. However, it was observed that the delivery practice vary from state to state, eg., in Kerala and Goa more than 90

> per cent deliveries take place in health institutions, while in most northern states majority of deliveries take place at home. Therefore the current RCH programme decided to decentralize this activity by involving NGOs to make it more local specific. (Park, 415)

The work of *dais* was seen as a necessary part of maternal health. Additionally, after finishing the training, the government provided a *dai* kit, complete with nail clippers, soap, gloves, string, a sheet, and a bowl in which to boil and sterilize the clippers and string with which the umbilical cord is cut. The *dais* were taught to observe "5 Cleans: clean hands, clean surface, clean new blade, clean cord tie, and clean cord stump" (National Rural Health Mission). This improvement to hygiene was emphasized, as a previous maternal death cause was infections caused by unsanitary practices, such as cutting the umbilical cord with a dirty blade, sickle, or against an unclean copper coin (Capila, 145). Emphasis was placed upon improving the hygiene and safety of *dai*-assisted delivery. It was also instituted that should a *dai* observe signs of a problematic delivery, she should refer the woman to the nearest hospital.

This idea of supporting the existing framework of the village *dai* through training was reversed upon pressure from international organizations and discourse about skilled birth attendants (SBA), specifically in 2000 with the development of the Millennium Development Goals (MDGs) (World Health Organization). Goal 5 had the aim of lowering MMR and included numerous sub-goals and indicators to measure progress; one of these indicators was the percentage of deliveries occurring with an SBA present (UN Millennium Project). This SBA is recognized as a doctor, nurse, or nurse midwife; *dais* and other TBAs are not recognized as "skilled" (and are thus suggested to be unskilled) (World Health Organization). Additional national and state indicators such as the percentage of safe deliveries also marginalize *dais*, whose deliveries are not counted within this number. Instead, trained *dais* are said to conduct "clean" deliveries, rather than "safe" deliveries.

As part of its attempt to increase the percentages of institutional delivery and deliveries with skilled birth attendants present, the NRHM instituted the JSY in 2005 and the JSSK in 2011. The JSY, one

of the largest Conditional Cash Transfer (CCT) Systems in the world, ranked states according to their performance. Uttarakhand, labelled at the time as a lower performing state (LPS), provided to women 1400 ₹ if they delivered in a hospital. Higher performing states (HPS) provided 700 ₹ per institutional birth to the mother if she was below the poverty line (BPL) (Park, 419). States provide up to 1500 ₹ to women who must undergo a cesarean section to help subsidize the cost. For women in all states, 500 ₹ is provided for each of their first two births if they choose to deliver at home (Park, 419). Additionally, the JSY compensated the Accredited Social Health Activists (ASHAs) for each institutional birth (600 ₹ in LPS and 200 ₹ in HPS); therefore institutional delivery became a major focus for ASHAs, as this financial incentive then became a large part of their income (National Rural Health Mission). The JSSK went further to encourage women to deliver in hospitals, providing free and no expense deliveries, including transportation, drugs, hospital stay, as well as blood and cesarean sections, if necessary (Park, 420).

Additionally, ASHAs were told in their training to first recommend institutional birth; only if this was impossible would they recommend birth at home with the Auxiliary Nurse Midwife (ANM) present, and only if the home was too isolated for the ANM to visit would they recommend a trained *dai* (National Rural Health Mission). Some of the outcome indicators in ASHA evaluation included: “percent of deliveries with skilled assistance, percent of institutional deliveries, percent of JSY claims made to ASHA” (Park, 414). Concurrently, *dai* training was discontinued. Training and support, as well as preservation of *dais’* knowledge, was left to non-governmental organizations (NGOs) (Park, 489). In areas where *dais* are still present, relevant, and much-needed installments for maternal health, NGOs provide training and *dai* kits, as well as monetary incentives to maintain the practice. However, emphasis remains on institutional birth.

7.2 Local Context and Setting

The study was conducted in the Kumaoni Mountains, a region of Uttarakhand. Originally part of Uttar Pradesh, India's most populous state, Uttarakhand was carved out in the year 2000 (Capila, 60). The state is composed of two regions, Kumaon and Garwhal. Kumaon lies at the cross-roads of Nepal, Tibet, and Himachal Pradesh, and the mountains there form the Himanchal range, the first belt of the Himalayas (Capila, 31). They are steep and formidable mountains, with rocky granite sticking out at striking angles. Daily work and travel is therefore influenced by these mountains; the hillsides are dangerous and difficult to traverse, and hamlets and villages remain scattered and isolated by the terrain. This complicates access to nearly every connection to the world outside the village, and even between houses within a village. Roads are long and windy, so travel is made slower. Mountain shadows block out cell phone and internet service. Access to any sort of government support of transport to a hospital is compromised; when an ambulance is called, it can only go as far as the road. With so many villages many kilometers and a steep climb away from the road, the ambulance drivers sometimes must carry a stretcher-bound patient some distance to the ambulance. Yet some infrastructure remains to support the Kumaoni people: some hamlets have the steep climb up to the road lined by a sidewalk, the roads themselves are frequently paved, and while electricity and water supply is unpredictable, the kindness of a neighbor is never lacking. The hardships of the landscape are overcome by the communities and their friendly demeanors.

The Kumaoni society has many difficulties, particularly for women. Men often migrate to cities to avoid unemployment, and women are left with some of the most physically challenging tasks (Capila, 61). They are often seen carrying large loads of fodder or firewood on their heads—they would have had to walk for many kilometers to gather so much, and frequently carry heavy loads to minimize the journeys back and forth. They rise early to cook and clean and gather fuel, work all day in the fields, and return to cook and clean for the family once more. In the culture, young women eat last, stay up the

latest, and rise the earliest (Capila, 46). Women face taboos about their reproductive life from their first period; while unmarried women are not supposed to acknowledge the existence of menstruation and must treat it with secrecy, the menstruation of married women is traditionally closely monitored (Capila, 116). The more traditional families will see the married woman go into isolation, sometimes living in the cowshed for days at a time and refraining from the lighter work of cooking and animal care (Capila, 126). These traditions are slowly fading away, along with most other traditions concerning home birth, including the use of cow dung to purify the unclean act of childbirth, as well as the practice of limiting protein intake during pregnancy to have a smaller and easier-to-deliver child (Capila, 132).

Yet Kumaoni women bear all this uncomplainingly—particularly the pains of childbirth (Capila, 45). Traditional women refuse to acknowledge pain or fear related to this, and return to their heavy workloads soon after giving birth. They have little control over how many children they bear or when and where they give birth. Instead this power usually resides with the mother-in-law, who traditionally avenges her poor treatment in her youth by taking liberties with her daughter-in-law in turn:

> It goes without saying that this component of society is restlessly toiling day in and out without demur or protest. However, they have no say even in the matter of bearing their children and are forcibly burdened with the agonies of unwanted births. Over occupied with breeding and nursing, the rural mothers have no time to even think about their own comforts, status, recognition, and independent career (Capila 46).

Yet all this is a stereotype, a brief portrayal of traditional gender roles and societal nuances. Kumaon is changing and modernizing, and these practices are changing as well. While women continue to work long days filled with heavy labor, traditions concerning their self-determination and familial interactions are diminishing and evolving.

7.3 Delivery Locations and Implications

Institutional deliveries, as mentioned before, are being prioritized by the Indian government at all levels; through requiring ASHAs to advise hospital births, as well as the JSY and JSSK policies that provide a monetary incentive for these deliveries, the goal of universal institutional delivery is established. This prioritization is being done to lower MMR—all is rooted in the idea that the hospital is the only safe delivery location (Sharma). This is particularly true in cases with complications; in an institution, equipment and trained doctors and nurses are available to better serve women with complicated deliveries (World Health Organization). However, many complications are dealt with through the cesarean section, from which a woman cannot quickly recover. There is also some thought that women who deliver in a hospital are more likely to receive higher quality postnatal care and will spend more time resting and recovering (Park, 489). Institutional deliveries are thought to better include women and their children in the health delivery system and encourage future health-seeking behavior (National Rural Health Mission).

However, some doctors also see the merit of home deliveries, particularly in remote areas (World Health Organization). It is worth noting that the explicit assumption made above that institutional deliveries will lower MMR is not necessarily that simple—the rate of institutional deliveries is increasing at a much faster rate than the MMR is decreasing. Home birth is supported by some doctors, who claim that most births are safely delivered regardless of location, as long as hygienic measures are taken. They advise all first pregnancies and complicated cases deliver in a hospital, but claim that if the mother has delivered safely before and no complications are expected, a home delivery is more economical and just as safe. Other supporters add that while institutional delivery is preferable, the *dai* is an important figure in keeping home births safe for those that cannot deliver in a hospital (World Health Organization). The ASHA's job is to encourage health-seeking behavior within her

community, regardless of where a woman delivered her child; therefore the location of a delivery should not necessarily determine the mother's and child's inclusion in the health delivery system.

8 RESEARCH METHODS

Twenty-two interviews in Okhalakanda block were conducted in total—nine *dais* and thirteen women. Eight *dais* that received training from the NGO Aarohi were interviewed, including two that also received government training. Additionally one untrained *dai* was interviewed. Of the women who were interviewed, five were pregnant and eight had given birth in the last year. The *dais* were asked questions regarding their training, delivery practices, antenatal and postnatal practices, interactions with ASHAs and ANMs, and general observations about their clients and services. Women were posed with questions about their previous deliveries, quality of antenatal and postnatal counselling and care, health-seeking behaviors of themselves and their children, satisfaction with services, feelings regarding birth, and future plans for delivery and child care. Primarily, they were asked where their child was or will be delivered, and why they chose that location and birth attendant.

The interviews were carried out in eight villages scattered across the Kumaoni hills in Okhalakanda block of Nainital district. Villages visited were chosen by Aarohi supervisors from the thirty-five different project villages for their convenience and availability of *dais* and pregnant women or recently born children. In some cases, translation had to take place between two translators: once from English to Hindi, and then from Hindi to the Kumaoni dialect. This was done in cases with older *dais* who did not understand or speak standard Hindi well. Distances from the road to the villages varied greatly; while some villages were on main roads, others were quite remote and required driving for many hours on gravel roads or walking for many kilometers up and down hillsides. Therefore it was also necessary to determine hospital accessibility and distance from the nearest health facility through observation. Records from Aarohi were also reviewed to extract data regarding health indicators and trends within

each village, as only one to three interviews could be conducted in each village, and this scarcity of data could provide an inaccurate view of health-seeking behavior as a whole in those villages.

9 RESULTS FROM INTERVIEWS WITH *DAIS*

The nine *dais* together had over one hundred thirty years of experience in delivery—the average *dai* had 14.67 years of experience. The minimum amount of experience was 5.5 years, while two *dais* both worked a maximum of 25 years. Unsurprisingly, the *dais* who had worked the longest were also the busiest. All the *dais* who had worked for over 15 years lived in villages in which most deliveries were conducted at home, while most deliveries were institutionalized in villages with *dais* who had worked for shorter amounts of time.

9.1 EXPERIENCE AND TRAINING

The dais interviewed were typically called on by delivering women to a lesser amount than expected. Only two of the *dais* conducted most of the deliveries in their villages, while two others only conducted unplanned deliveries in which there wasn't enough time for the mother to get to the hospital. Two of the *dais* said they conducted about two or three deliveries per year (they did not specify if these were planned or not); most of the deliveries in these villages occurred in the hospital. The least experienced *dai* (practicing for 5.5 years) said she had not delivered any children for the past 4 years. One of the *dai* interviewed was untrained and only delivered babies born into her family by her younger relatives. The other deliveries in her village were conducted by a trained *dai*. Another *dai* was trained but said most deliveries were being delivered by untrained *dais* who were closer to the delivery locations. This is not representative of the typical delivery distribution in Okkhalakanda, where 37% of deliveries are institutional, 30% are conducted by a trained *dai*, and 33% of the deliveries are conducted by an untrained *dai* (Aarohi Arogya Project).

Training was typically sought out by the *dais*, though some communities also requested for their *dais* to participate in training. Most of the training focused on hygiene and reducing infection from childbirth. Eight of the nine *dais* interviewed were trained *dais*; two of these also received training from the Indian government before training programs were discontinued two years ago. All of the trained *dais* said they chose to be trained in order to learn more and conduct deliveries safer, though two *dais* also said they were approached by people in their villages that asked them to go to training—this demonstrates communities' desires for safe home deliveries. Seven of the eight *dais* said they primarily learned about hygiene and that after training they were much more careful about sterilization and keeping the "Five Cleans" with the help of their *dai* kit. One of the *dais* claimed she had already known how to conduct clean deliveries and the training had taught her about identifying complications. Before training, she conducted all deliveries, but after understanding the different complications that could occur, she now refers complications to a hospital when she identifies them. The untrained *dai* said she did not get training because health issues prevented her traveling to Khansyu, where Aarohi conducts occasional *dai* training sessions. She mentioned that she still conducted clean deliveries, boiling the blade with which she cuts the umbilical cord.

To account for the 33% of deliveries that were conducted by untrained *dais*, the *dais* interviewed were asked why a woman might seek out help from an untrained *dais*. Five of the *dais* said they did not know of any untrained *dais* in their village, though the other four speculated on why a woman might call a *dai* without training. One *dai* said that she conducted most of the deliveries, and that someone might call another *dai* if they had a personal issue with her, or felt uncomfortable receiving her services. *Dais* in another village said they gave antenatal advice and made recommendations about the delivery that some mother-in-laws refused to follow, causing them to seek out other *dais*, sometimes untrained. One trained *dai* said that the untrained *dai* only delivered her family's children, and that she delivered all other babies. Only one village reported that most babies

were delivered by untrained *dais* there—the trained *dai* there said that the untrained *dais* were chosen primarily based on proximity to the delivery. The village was very scattered across the hillside, and people would call on the closest *dai* for help, particularly if the delivery happened at night. She claimed that many people did not know she was trained or acknowledge the value of her training, but a few cases called on her specifically for her training.

9.2 COMPLICATIONS

All *dais* interviewed said complications were very rare; four *dais* (including the untrained *dais*) said they had never seen a complicated case. One *dai* said she had refused to conduct breech deliveries and the delivery of twins, referring the women to the hospital. Two of the *dais* said they often gave advice to women, but some refused to listen and instead called on untrained *dais*. One *dai* said she saw many complicated cases due to anemia, a very common problem in pregnant women in India. Another *dai*, who was one of the most experienced and had conducted most of the deliveries in her village for twenty-five years, said she had conducted a breech delivery, as well as a case in which the placenta would not be delivered. In the latter, she advised the woman go to the hospital, but she had refused. The *dai* was able to induce delivery of the placenta through massage.

Though *dais* typically act only as birth attendants, when they refer women to the hospital, they sometimes accompany them there as emotional support, particularly if they are family or close friends with the woman. Four of the *dais* said they had previously gone with women who had complications to the hospital, though they said that was a rare occurrence. One of the *dai* interviewed said she did not accompany women herself due to nausea on the long roads, but that she worked with a partner *dai* who was currently with a woman at a hospital in Haldwani serving as emotional support. Four of the *dais* said they would not accompany a woman to a hospital, though one claimed the ASHA would go instead. One of the *dais* said the roads were too difficult for travel, saying she had not even been able to go to the

hospital with her daughter-in-law when she had complications. Two of the *dais* interviewed who accompanied women to the hospital and the partner *dai* who was currently accompanying a woman to the hospital practiced in villages where most deliveries were institutional. Two of the *dais* (an untrained *dai* and a trained *dai*) who accompanied women to the hospital both lived in a village where most deliveries were conducted by the trained *dai*. However, the trained *dai* noted that the number of home deliveries was decreasing there, as more and more deliveries were institutional.

9.3 Interactions with Government Health Workers

No *dais* reported working closely with their local ASHA to provide maternal health services, guidance, or counselling, though no rivalries or disagreements over the JSY incentive money were exposed. Three *dais* interviewed claimed they had no interaction with the ASHAs professionally, thought they had no disagreements with them. Two of the *dais* claimed they called the ASHA when a delivery happened so the ASHA could weigh the baby and document the delivery, but that the ASHA would not call them about a pregnant woman. One of the *dais* had an ASHA as a daughter-in-law; this is the closest connection documented through the interviews. In three of the interviews with *dais*, the ASHA was present; this makes it unclear how closely the *dai* and ASHA work together. Personal relationships like family relation and friendship do not necessarily guarantee professional interaction. However, none of the *dais* interviewed responded that there was any tension with the ASHAs, despite the ASHA's monetary incentive from every institutional delivery. Most *dais* laughed at the idea and said payment for services was of no concern to them; many said the ASHA worked hard and deserved the money she earned from each institutional delivery. None of the *dais* said they knew the ANM well.

9.4 COUNSELLING

Information about antenatal and postnatal care provided by the *dais* was spotty and variable; two *dais* provided incorrect information, and another two *dais* claimed to provide counselling, though a woman who had called them said she did not receive any guidance or advice. The two *dais* who delivered most of the babies in their villages were able to provide the most information about the counselling they provide—one of them even takes the fetal heartbeat during ANC visits. It is unsurprising that the most experienced *dais* also provide the best quality counselling. Three of the *dais* who lived in villages where most of the deliveries were institutional even advised delivering babies in a hospital and took cases when a woman refused to go for personal reasons.

Only three of the nine *dais* interviewed said they encouraged women to get antenatal check-ups, though they did not accompany women to these check-ups. Two of the *dais* did not know about check-ups at all and were unfamiliar with the concept. Two of the *dais* suggested women get iron and folic acid (IFA) tablets, and four *dais* suggested women get tetanus toxin (TT) injections, explaining the date the ANM will visit. Two of the *dais* said everyone already knew when the ANM visits and did not bother making suggestions.

All of the *dais* provided counselling about workload and nutrition—this was most of the information and counselling the *dais* provided to their clients. However, it is unknown if they provide this information to every woman and if the women follow their advice. Three of the *dais* advised women to take at least one hour of rest per day, while another *dai* only advised women to take rest in general. Four of the *dais* advised women to avoid heavy work and to only do light work; one of these *dais* also told women to work more slowly and not to carry heavy loads to avoid injury. One *dai* advised women to eat more frequently, while the others provided information about the kinds of foods that make up a good diet. Four *dais* only said they discussed diet in general, while three specifically advised green vegetables. Milk consumption was suggested by three of the *dais*, and one *dai* even advised pregnant

women to eat meat, despite North India's widespread vegetarianism and the local tradition of restricting protein intake during pregnancy to ensure a small and easily-delivered baby. One of the *dais* advised women to eat well postnatally so they could provide a lot of nutritious breastmilk to their child.

After delivery, ASHAs are supposed to visit the mother and newborn to provide postnatal check-ups. However, all nine *dais* said they also visited the home-born baby at least once, depending on how far away she lived from the mother. Three of the *dais* said they checked on the baby once or twice after two or three days. Four of the *dais* said they visited the child two or three times, while another said she visited two or three times if the baby was far away. If the child was born nearby, she said she visited four or five times. One of the *dais* who delivered most of the babies in her village visited on the third and fifth days after birth, saying she gives advice if the baby has complications like excessive crying and refusing to breastfeed. The other *dai* who conducts most of the deliveries in her village said she checked the baby's color. The *dai* who practices in the village where most deliveries are conducted by untrained *dais* gave a lot of advice in the two to three postnatal visits she conducts. She says she observes the baby and mother, examining the baby's color and if it is breastfeeding or not. She also claimed to have worked, along with the ASHA, to convince families to remove borders made of cow dung from near the newborn, and instead replace them with borders of banana leaves. The *dai* advised all the families she knew with small children about the harmful effects of cow dung.

Three of the *dais* claimed to discuss child vaccination after delivery, advising women when the ANM will visit the village to vaccinate children. Two of the *dais* said the people in their village already knew when the ANM visited and therefore did not bother suggesting vaccination. One of the *dais* did not know anything about vaccination, while another *dai* knew vaccination was important but did not know the schedule. The untrained *dai* knew a child should be vaccinated but provided the wrong information about child vaccination schedule—it is unclear whether she actually provided women with that information or if she was trying to impress the interviewers.

Some of the only interaction some *dais* had with the government health system was when they called the ASHA to weigh the baby. Three of the *dais* said they called the ASHA to weigh a baby after delivery; one of these *dais* was mother-in-law to her village's ASHA. Two of the *dais* responded that the ASHA found out about a delivery herself and came to weigh the baby, while another two said they encouraged women to get their child weighed. One *dai* said 2.5 tobelow 3 kg was a normal weight for a baby, while the least experienced *dai* incorrectly said 5 kg was normal.

None of the dais claimed to provide information about child spacing or family planning, though most said they encouraged breast feeding, which is known to delay the start of the menstrual cycle after delivery. However, no dais said they suggested breastfeeding for this purpose, focusing instead on its importance for child nutrition.

10 Results from Interviews with Women

Of the thirteen women interviewed, five were pregnant (ANC) and eight had given birth in the last year (PNC). The average age was 22.5 years; the ANC were 21.75 years old on average, and the average age of PNC was 23.29 years. The ANC women had 1.2 children, on average, not counting the child with whom they were pregnant. The PNC women had two children on average.

10.1 Delivery Practices

While thirteen women were interviewed, they were asked about all previous deliveries, so that in total twenty-seven deliveries were discussed. However, the distribution of deliveries was not as expected based on the Aarohi 2015 Annual Report. Five of the deliveries had not yet occurred (these were those discussed by the ANC women), while eight happened within the last year and fourteen deliveries occurred longer than one year ago. Of the five deliveries that had not occurred yet, three of the ANC mothers planned to deliver in a hospital while two wanted to deliver at home. Of the previous

births, eight were home deliveries and fourteen were institutional. Of the PNC births that occurred less than one year ago, two occurred at home and six in the hospital. For the purpose of further analysis, future births will be assumed to occur in the manner in which the mothers predicted. Seventeen of all deliveries discussed (63%) were institutional deliveries, and ten (37%) occurred at home. Of the ten home deliveries, eight (30% of total deliveries) were conducted by a trained *dai*, while one will be conducted by an untrained *dai* and one was unattended. One of the home deliveries conducted by a trained *dai* was a stillbirth. However, this information is not representative of the Okhalakanda villages in 2015, where 37% of deliveries were institutional, while 47.6% of the home deliveries were carried out by trained *dais* (Aarohi Arogya Project).

In analyzing distribution trends, it was noted that most women stick with one delivery location and do not change locations without serious counselling or emergent delivery situations. Most women had either delivered all of her children at home or all in the hospital; only two had changed locations. One woman, who was an ASHA, attributed this switch from home to institutional delivery to her education about safe delivery, claiming for her first delivery she did not receive any counselling about institutional delivery. The other of the two women wanted to deliver all her children at a hospital, but her most recent delivery was so swift that she had no time to travel to the nearest Primary Health Center (PHC). Four of the deliveries discussed were unplanned in this manner and resulted in home deliveries. These quick deliveries that leave no time to travel to the hospital comprise 40% of the home births discussed and 14.8% of the total deliveries. Of these unplanned deliveries, three of the four were attended by trained *dais*, while one was completely unattended. The unattended delivery was complicated by an undelivered placenta, for which a trained *dai* was called afterwards to remove through massage.

Seven of the deliveries discussed had complications or have predicted complications. However, the women responded to this in very different ways. Two of the five women who reported having

complications delivered in the hospital because of fear of the complications and under doctors' advice; one of these women wanted to have home deliveries but was convinced to deliver in a hospital for each of here three deliveries due to a recurring complication. Another two women who had complications delivered at home out of fear of receiving a cesarean section at the hospital; both had been advised to have a Cesarean by a doctor during a check-up and were convinced to deliver at home to avoid the operation. The final complication case was the stillbirth, which occurred at home, attended by a trained *dais*.

10.2 Delivery Decision Factors

The primary factor considered in the delivery location decision was hospital accessibility. However, the distance from the village to the hospital had less of an impact than the distance from the village to the road, where an ambulance could be waiting to take the woman in labor to a hospital. Villages like Khansyu or Muraa, which is a part of Okhalakanda, which were on the main roads and are close to hospitals have most of their deliveries in the hospital. Karayal and Bhadrakort show how infrastructure makes a huge difference in accessibility and delivery location outcomes—while both were some distance from the road, and about the same distance to a hospital. Karayal had a paved path to the road, while Bhadrakort women must hike up a steep hill on narrow unpaved trails to reach the road. It is not unsurprising that most deliveries in Karayal are institutional, while most women in Bhadrakort use a trained *dai*.

However, the comparison of Teemar, Rakuna, and Kwedal show how hospital accessibility is not always the most important factor in if women deliver in a hospital—hospital accessibility can be over-ridden by culture and traditions within each specific village. Teemar was hours away from the closest hospital and the drive there required driving on a rough, unpaved road that locals called the "roughest road in the region." Most deliveries there occurred at home. Rakuna was also far from a hospital,

though not as far. The road to Rakuna was only currently in the process of being paved, though there had not been a home delivery in the village in four years. The village of Kwedal was even closer to the hospital than Rakuna and also closer to the road, but still women there mostly chose to deliver with a trained *dai*. There was a culture of home deliveries that existed in Teemar and Kwedal that was not present in Rakuna. There was much more discussion about the safety available in hospitals in Rakuna than in Teemar, where only women with complications go to the hospital. By contrast, women in Kwedal, though they had much more accessibility to a hospital, discussed a lot of fear of institutions, particularly of cesarean sections.

Another factor analyzed was relationship with health providers, as this could impact a woman's decision on where to deliver. Women who delivered at home seemed to have either pre-existing relationships with the *dai* who delivered their child, or had some personal disagreements with the government health workers. Of the four women who are home deliverers, one is close friends with the trained *dai* that conducted her home births, while another is the daughter-in-law of an untrained *dai* who plans to conduct her delivery. The other two showed signs of having personal issues with the ASHA; one was reluctant to even mention her name, while another's husband refused to allow the ASHA to weigh his baby or record its birth. On the other hand, most institutional deliverers had looser connections to *dais* and were closer with government health workers, except for one exception. Two of the nine women who delivered in a hospital had no problems with any health providers and knew of their ASHAs, ANMs, and local *dais*. Two of the institutional deliverers didn't know of any *dais* (despite one of these interviews occurring in the *dai*'s house) while another seemed embarrassed and was very reluctant to acknowledge that she knew a *dai*. However, one of the women who planned to deliver in a hospital was the daughter-in-law of a trained *dai*; while her first delivery also took place in a hospital, her most recent delivery occurred too quickly to get to the hospital, and her mother-in-law conducted the unplanned delivery. She mentioned being yelled at by the ANM for having too many kids too quickly.

Another institutional deliverer did not know her ANM, as she was new to the job, while another women who gave birth in a hospital was very good friends with the ASHA and was visited by her every day. One of the women had delivered her first child at home, but after undergoing ASHA training decided to have her later children at the hospital.

A third factor analyzed was fear—of the women who responded, two said they had no fear of childbirth, while ten reported feeling scared or nervous. Those that feared childbirth made up 66% of women who preferred institutional deliveries and 75% of women who wanted to give birth at home. In some cases, women responded that their fear led them to deliver in the hospital, where they considered conditions safer and emergency equipment and expertise more accessible. In other cases, women who were afraid preferred the comfort of home. The most influential cause of fear was the caesarian section. Two of the three women who preferred home births and responded that they felt nervous about childbirth claimed they were afraid of cesarean sections, while the third refused to answer, which the translator interpreted as fear of cesarean sections as well. Of the women who reported no fear, two preferred hospital deliveries and one delivered at home with a trained *dai*.

Women were also asked about the role of family opinion in their decision to give birth at home with a trained or untrained dai, or at a hospital. Every respondent claimed their family supported their decision, though the younger respondents answered in ways that indicated the choice was not theirs to make. While self-determination is subjective and difficult to analyze, five women were extremely shy and were in the presence of their mother-in-law—these women were determined not to be the decision-makers when it came to birth attendant and location choice. The others were either interviewed without older women present or answered confidently; this does not necessarily attribute the decision to them, but for the sake of this analysis, they are said to be the decision-maker.

Finally, women were questioned about the influence of the JSY incentive in their delivery location decision. Only two of the respondents were unaware of the JSY incentive; one of these

delivered in a hospital, while another planned to give birth at home. In every case, women responded that the money was not important to their decision; those that chose to deliver in a hospital attributed their decision to a desire for safe delivery, advice from doctors, ASHAs, or NGO workers, and greater accessibility of expertise and equipment in the case of a complicated delivery. Respondents answered that they would deliver at the hospital again in the future regardless of the monetary incentive, though one woman noted that "it is good the government gives the money, but safety is more important." Women who delivered at home also responded that the JSY delivery made no difference to their delivery decisions—either they delivered without adequate time to get to a hospital, or they were determined to give birth at home regardless of the monetary incentive.

10.3 Antenatal and Postnatal Care

The women interviewed received various amounts of ANC and PNC. The 2015 Aarohi Annual Report reports that while 97% of women receive some sort of ANC, only 13.5% of women receive full ANC, which includes 3 check-ups, TT injection, and 100 IFA tablets (Aarohi Arogya Project). All the respondents got TT injections from the ANM, except for one that got this injection at the PHC in Okhalakanda. Of the eleven women who responded that they got TT injections, four delivered at home and seven in the hospital. However, only three women received IFA tablets from the ANM; eight of the women were supplied IFA from the Aarohi Mobile Medical Unit (MMU) due to a government shortage of IFA. The woman who received her TT injection from the Okhalakanda PHC also received IFA there, but admitted she did not take the tablets due to the nauseating side effect. She delivered at home rather than in a hospital.

Overall, women did not get enough check-ups and ultrasounds to meet WHO criteria for full ANC. However, delivery location or expected delivery location had little effect on the number of check-ups and ultrasounds. Six of the respondents got ultrasounds and check-ups during their pregnancies.

Two of the women will deliver at home; one got two ultrasounds and check-ups from the MMU, while the other went to a hospital in Haldwani monthly due to complications. The remaining four women are institutional deliverers; two got two ultrasounds each, while the other two got only one each. One of the women had four check-ups from the MMU, while another had one MMU check-up and two additional check-ups from the Aarohi supervisor. The remaining two women had only one check-up each from the MMU.

There was no difference in antenatal work practices in the home deliverers and institutional deliverers. Of the respondents who claimed to work the same amount during pregnancy, half delivered at home and half in an institution. Likewise, of the women who responded to only do light work while pregnant, half delivered at home and half delivered in the hospital. This shows the home deliverers and institutional deliverers received about the same amount and quality of counselling about workload. However, postnatal working practices were very different. Of the women who had given birth in the last year, two that delivered in the hospital were still resting. The rest of the women had returned to work after varying periods of rest. The maximum rest time was 1 to 2 months after an institutional delivery, while the minimum rest time was 5 days after a home delivery with complications. Those that delivered at a hospital waited 25 days on average before resuming hard labor, while the home deliverers rested for 17.5 days on average.

Of the home deliverers, half claimed to eat more food, while half ate the normal amount. Of those that delivered in an institution, two thirds of the respondents ate more, while the other third ate the normal amount. No woman said she ate less either during or after pregnancy; one of the respondents that ate more said she ate a lot of rice due to nausea, while another said she ate more frequently.

Women were asked if their children were weighed and vaccinated after birth as an attempt to measure inclusion of the child in other government-provided health services and in Mother and Child

Tracking System (MCTS). Seven of the eight PNC babies born within the last year whose mothers were interviewed were weighed after birth. Of those who were born at the hospital, five of the six were weighed there by the nurse, while one was taken home and weighed by the village anganwadi. Of the two babies that were delivered at home, the ASHA weighed one after birth. The un-weighed baby would have been weighed by the ASHA, but a personal disagreement between the child's father and the ASHA led him to refuse to allow her to weigh her baby or record its birth to the government.

Three of the seven babies had received no vaccinations, even though two of the unvaccinated children were delivered at a hospital; this has been attributed to fluctuating stocks of BCG vaccine in government PHCs. Of the institutional births, while two were not vaccinated, three were able to be injected at the hospital by the nurse while one was taken home and vaccinated later at the local sub-center. Of the home births, one was vaccinated by the ANM while the other had not yet been taken to the local PHC for vaccination.

10.4 COUNSELLING

Women were asked what counselling and information they had been given, and from who; this was done to see if outreach by the ASHA and ANM applied equally to home deliverers and institutional deliverers alike. Most importantly, the delivery preferences for those who were not effectively counselled was noted, to show who was most likely to be left out of the counselling process. Of the thirteen women interviewed, two said they had not received any counselling, while three could not explain what advice had been given to them. Of the two who did not receive any counselling, one delivered at home and one in the hospital. Two of the three women who had been ineffectively counselled delivered at home, while the third was an institutional deliverer. Additionally, two women who delivered in the hospital noted that the attending nurse offered no counselling at all, and had to get advice elsewhere.

Aarohi supervisors counselled the most women (eight of the thirteen women, 61.5%): three women said they received information about nutrition, two were told about breastfeeding, and diarrhea, workload, and vaccination were discussed with one woman each. One Aarohi supervisor was successfully able to suggest birth control pills to a woman who decided she had enough children. However, Aarohi supervisors were only able to provide information to one woman who delivered at home, and she was unable to say what was explained to her.

ASHAs counselled seven of the thirteen women (53.8%) but were able to reach more of the home deliverers; three of the seven women counselled by ASHAs delivered at home. ASHAs provided information about breastfeeding, nutrition, and diarrhea to one woman each, but three women who were counselled by ASHAs were ineffectively counselled and could not say what information they had received. Of these three women, two plan to deliver at home (one with a trained dai and another with an untrained dai) while one woman delivered at a hospital. One of the women interviewed was an ASHA herself, and learned counselling information in her ASHA training.

ANMs counselled two women; one delivered at home and the other in a hospital. However, the home deliverer was unable to say what the ANM told her. The institutional deliverer was told by the ANM about nutrition and diarrhea. Additionally, one institutional deliverer claimed the ANM's attempt at family planning counselling ended in her yelling that she should stop having so many children and that she had enough babies already. Of all the women who delivered at a hospital, only one claimed to have been counselled by her, saying she received information regarding breastfeeding and vaccination. Two women specifically said in their interviews that they were not counselled by the nurse at the hospital at all. One woman was given information regarding infant care by a doctor when she complained of her child vomiting after being fed.

11 Discussion and Recommendations

The role of the *dai* is quickly changing—the traditional importance of the *dai* in the Indian village is dwindling as her client base shrinks and government policies marginalize her abilities. However, in the rural villages of Okhalakanda this general trend does not apply to all villages. In many villages, *dais* still deliver most children. In others, *dais* serve an important role of emergency delivery care. In still other villages, *dais* find themselves out of work and out of practice. While the isolation of the villages does not always result in decreased rates of institutional delivery, the *dais* in those villages still conduct the deliveries in which the mother cannot reach the hospital. The government's recommendation of an ANM travelling to a mother in labor in an isolated village is not generally seen in Okhalakanda block; instead, the *dais* are necessary to serve all those that can't get to a hospital. Additionally, *dais* serve women who choose not to deliver in a hospital, with reasons ranging from family pressures to fear of a Cesarean Section to a disinclination to travel long distances when in labor. They also can serve as emotional support for women who they refer to hospitals.

11.1 Delivery Location Choice

The way in which women think about childbirth is also changing. With the advisement of the ASHA and the current government policies, more and more women are having institutional deliveries. While the JSY and JSSK provide monetary incentives to women who deliver in a hospital, they have a much larger effect by providing incentive to the ASHAs, who are then more likely to influence women to deliver in a hospital. None of the women said they chose to deliver in a hospital for the incentive, citing safety and lower amounts of fear in a hospital delivery instead—the ASHAs' advice about the safety of institutional delivery has created a culture of delivering in a hospital and understanding that institutional delivery is safer than delivering at home.

However, other women choose to deliver at home to stay in the security of their homes, or so their close friend or relative can help deliver their baby. The community ties influence women not to leave. This personal decision has recently been favoring institutional delivery, but Dr. Puneet Singh of Aarohi has observed a back and forth balance to where women prefer to deliver and what professionals recommend, saying the preferred delivery location is always changing. He recommends women deliver in a hospital for their first delivery and if complications are expected, but otherwise sees no reason they should not have a clean delivery at home (Singh, Personal Interview). This view is supported by the rarity of complications and the *dais* being trained to recognize and refer complications to the hospital.

The women who choose to deliver at home also often do so out of fear of the hospital, specifically fear of cesarean sections and the long recovery time in which they would not be able to work. Women who wish to return quickly to work also possibly choose to use trained dais who will support the perineum to prevent tearing—in one of the institutional deliveries discussed in interviews, the perineum was allowed to tear and was later sewn up with stitches that further extend the resting period. This reasoning exposes the ingrained societal inequalities forced upon women; the prime example of this sexism and drudgery is shown in the case of the young mother who delivered at home despite advice from a doctor calling for a cesarean section. After her dangerous unattended delivery, a trained *dai* was called to massage out the placenta. The woman returned to work after only five days, taking pride in being a “brave lady.” Others feared complications and a cesarean section despite not having any predicted complications. This popular myth of doctors only conducting cesarean sections serves to scare women away from hospitals, particularly when they need the safety of an institution the most.

The principle behind this fear of the cesarean section lies in wanting to return to work with minimal recovery time. While respondents were not asked about the state of their finances, this might play an important role in how delivery location is chosen. If a woman lives in a household with financial

issues, one might infer that she would need to return to work more quickly and therefore choose to deliver at home, where the recovery time is lower. However, women in Okhalakanda typically perform the same domestic duties and farm work regardless of the household's finances. The real difference seems to be in the community ties and familial support—one woman was able to rest for longer and have an institutional delivery because her sister came to help do her work, while another woman returned to work only 5 days after her home delivery because of familial expectations that she return to work quickly. In village life, most people are BPL and therefore workload differences are less associated with financial inequality.

Additionally, while women were not asked about their educational status, one can imagine its effect on women's choices to deliver in a hospital or at home. Women who went to school might be more likely to trust government workers' advice about institutional delivery and follow their ASHAs' and ANMs' suggestions to deliver at a hospital. They might be more willing to continue to be involved in government schemes and more aware of how to receive government services than women who did not go to school and have had little interaction with previous government services. Additionally, women who are educated could be more likely to belong to a household with a better financial situation—as described above, the influence of the household's finances on delivery location is still unknown.

An important factor that was observed in the interviews was the self-determination of the woman. In some cases, it was clear from their timidity and lack of convincing answers that women were not making the decisions about where to give birth. Instead, often an older woman—typically the mother in law—would answer for them. While there was an exception where a woman with low self-determination had institutional deliveries with the guidance of her mother-in-law (who was actually a trained *dais* herself), the other four cases like this in which the mother-in-law was the principle decision maker ended in a home birth. There is a common myth that older women commonly think that because they delivered safely at home with a *dai*, their daughter-in-laws should deliver in a similar way. In one of

the cases, the mother-in-law was an untrained *dai* who delivered every child in her family—in this case it is clear that her daughter-in-law would have no choice about where to deliver.

11.2 Implications of Delivery Location on ANC and PNC

Dais traditionally served women by only conducting their deliveries at home, but now, with the guidance of the ASHA, more women are receiving ANC and PNC care and counselling. Women think more about the involvement of others in the pregnancy and taking a more active role in their pregnancies. *Dais*, despite claiming they provide counselling information and encourage women to receive ANC and PNC, give hugely variable amounts and quality of information. While women who deliver at home do not receive less ANC and PNC care than institutional deliverers thanks to outreach from ASHAs and ANMs, they receive much lower quality counselling. This is evident in the case of the home deliverer who received IFA from her ANM, but did not get enough counselling to be able to accommodate the side effects. The home deliverers and institutional deliverers all got TT injections and were just as likely to get check-ups, but women who delivered at home were not able to say what advice they had been given. While some would say those women simply didn't listen, it is the ASHA's job to ensure women are prepared and well-informed. This deficiency in information given to home deliverers is found across the board from all advisers, including those who work for Aarohi, and may have a big impact on both their decisions to deliver at home and the health of themselves and their child.

One of the biggest differences apparent in the results in PNC of home deliverers and institutional deliverers is in how much rest they take after delivery; the women who delivered at home returned to work much sooner than those who delivered in a hospital. One home deliverer even returned to her heavy labor a mere five days after giving birth. This can be interpreted in many different ways. Women who deliver in a hospital would have longer resting times if they underwent a cesarean section or got stitches, while women who deliver at home could have chosen to have a home delivery in

order to return to work quickly. Women who deliver at home could also receive less information or lower quality counselling regarding workload than a woman who delivered in a hospital. Additionally, women who seek out medical intervention from a hospital could also think very differently about the physical implications of childbirth on her body and on her health.

Whenever a pregnancy is recorded or a delivery occurs, it is registered in the MCTS; this is how ANMs know how many vaccinations to provide and how many children she must monitor for malnutrition. Therefore, when a delivery occurs in a hospital, it is registered, and the child weighed. However, vaccination does not always occur there due to shortages in government PHCs. A concern for home deliverers is that they are more likely to be excluded from this tracking. However, it was found that due to outreach from the ASHA and the ANM, a home-delivered child is just as likely to be weighed and vaccinated. Yet if anyone were to fall through the cracks, it would be a mother and child who were estranged from the government health workers who provide this outreach work and are therefore more likely to deliver at home and avoid government health institutions. One of the home-delivered children who was not weighed or vaccinated yet had a father who refused to allow the ASHA to register the birth due to personal disagreements.

12 RECOMMENDATIONS

The *dai* training primarily served to teach about hygiene, although one *dai* said she learned the most about complications. This information is relevant to the *dais*' current practices and role as a birth attendant; however, an idealist would call for training to include information to fill the aforementioned counselling gap, particularly because they serve populations that usually aren't counselled effectively, and because currently most *dais* do not counsel effectively and currently only provide information on diet and workload. This could be greatly improved. *Dais* are well-established maternal care providers in their communities—it makes little sense to limit their services to only providing clean deliveries. In

addition to learning ANC and PNC counselling information, training that includes information about inclusion of mother and child into the health delivery system is equally as important, so *dais* understand the importance of registering births with ASHAs and weighing the child after birth and can more emphatically recommend these services. This would both rely on and support a growing professional relationship between ASHAs and *dais*.

However, there are downsides to *dai* training; this controversy exists for a reason. By training *dais* to conduct deliveries, the original cultural practices of *dais* can be lost. More importantly, providing trained *dais* can be seen as encouraging women to deliver at home, even in cases where they should deliver in a hospital due to complications. It can encourage dependence on *dais* rather than working to provide adequate institutional resources to women, and if *dais* were trained to provide ANC and PNC counselling, this could cause ASHAs to not counsel as well, despite counselling being one of their primary responsibilities. Additionally, many claim *dais* are becoming more and more irrelevant as women switch to institutional deliveries in greater numbers; because of this irrelevance, money is better spent strengthening institutional delivery services. This is especially the case in those who argue *dais* should be given priority for ASHA training. *Dais* are typically illiterate, and while *dai* training is designed for those who cannot read, the ASHA training consists of many booklets and assumes all ASHAs have completed at least the 8th year of schooling. Redesigning this training is ineffective, especially considering *dais* are typically reasonably old and this investment would not have long-term payouts.

Yet training, if done properly, only erases the negative and dangerous traditions. If training is truly successful, *dais* are able to recognize and refer complications, as well as act as birth attendants in emergent situations in which the woman cannot get to the hospital. It allows the society to make use of the *dais*' places in their communities to provide last-ditch services. If counselling skills and health delivery inclusion is also taught, the *dais*' roles in their community would change significantly to that of an advocate for better health rather than a one-time service provider. *Dais*' roles in their villages can

continue to change and evolve over time, furthering their involvement in health services—as they have access to hard-to-reach populations, an idealist would hope *dais* could one day serve as extra eyes and hands in their communities, learning skills similar to those of the Comprehensive Rural Health Project's Village Health Workers. In this project, started in the 1970's, illiterate village women were taught health delivery skills in a program that went on to inspire the NRHM's ASHA model. If dais' skills can be increased to complement ASHAs' and ANMs' current responsibilities, fewer women who choose to deliver at home would fall through the cracks, particularly in the counselling information they receive. If dais can take a greater integrated role as a health worker, they can act in a complementary fashion to the existing government roles to improve overall village health. This is how the *dais*' place in the village can truly be used to the greatest extent.

Furthermore, the increase of institutional deliveries does not erase the reality that only 37% of deliveries in Okhalakanda are institutional (Aarohi Arogya Project). Elsewhere in India, criticism of this universal institutional delivery scheme has revealed that there are often not enough beds to accommodate every delivering woman in the area; like these places, a 100% institutional delivery rate in rural Uttarakhand is not always practical (Shailabai, Personal Interview). As long as *dais* continue to conduct so many deliveries in their villages, they remain important figures in maternal care. It is vital that they receive the recognition and support to provide the best possible services and information to the women in their villages, so that the women they serve can receive the quality of care to which they are entitled.

13 CONCLUSIONS

The changing state of institutional and home deliveries is resulting in a reevaluation of the role and reputation of *dais* in villages across India. The demand for *dais* and the reasons why women call on *dais* are changing; as the Indian government has adopted a goal of universal institutional delivery, it has

also adopted the Western framework that all pregnancies are a risk, and that the medical intervention available at a hospital is necessary for a safe delivery (World Health Organization). This policy, communicated to women through the JSY-incentivized ASHAs, has begun to change the former culture of childbirth, in which normal deliveries required minimal assistance from *dais*. Yet the change is not complete—plenty of villages, particularly in the isolated hills of Uttarakhand, still utilize *dais* for 63% of deliveries (Aarohi Arogya Project). While *dais* still serve villages whose culture has not yet adopted institutional deliveries, they also play an important part in assisting women who do not have time to get to the hospital, a common occurrence when villages are often long distances from hospitals and roads.

Dais' clients are surprisingly just as likely to be included in government services like check-ups, TT injections, and the MCTS, thanks to the outreach from ANMs and ASHAs that include women who are reluctant to go to the hospital. However, this outreach work does not extend to quality counselling; while home deliverers are just as likely to get an ultrasound or an injection, they are much more difficult to counsel effectively. This gap in advisement is perhaps even shown by their choice to deliver at home, as most counselling also advises institutional delivery.

This lack of counselling contributes to the already-dismal picture of a woman who has low self-determination, whose mother-in-law decides she will bear her children at home in order to quickly return to her hard labor. Motivations for having a home birth are often seen as backward: a fear of the hospital, the necessity of placing labor over health, the disempowerment of young women who have no say in when or where they give birth. However, these realities cannot be improved if policy only serves those who are able to give birth in a hospital. Those who need help and counselling the most are often those who don't receive it, who lie beyond the reach of the outreach work of ASHAs and ANMs.

Yet these women are serviced by the *dais*, who are their neighbors and friends and advisers. The *dais* can and do reach these women, and if provided with proper information and enough incentive, can fill this counselling need to improve the health outcomes of women who currently lie outside the reach

of the current government health workers. It is irresponsible to blame home deliverers for their choice not to deliver at a hospital, as the choice is often not theirs to make. Maternal health services and safe delivery must be provided to *every* woman, not only those who can make it to a hospital. And so while training *dais* can appear to be an endorsement of home delivery with all of its backwards connotations, it is a necessary part of ensuring this promise to all women who lie beyond the influence of the government. International discourse claims *dai* training is ineffective at lowering MMR, but a more comprehensive training could affect many more health outcomes than only MMR, and could help re-define the role of the village *dai* once more into a community health worker who serves those currently not included effectively by government health workers. The marginalization of *dais* could be the end of this historic figure, but more likely *dai* practices will continue unregulated and dangerously unless the *dai* is brought back into the fold and used to serve the community in a more meaningful and integrated way.

14 Further Study

Unfortunately due to the small scale of this study, representative figures were not found. Future study could attempt to get a more representative view of maternal health services, particularly in counselling received by home deliverers. Additional study could determine if a link between household finances or education and home delivery exists, as this paper has already discussed and suspected. Finally, a more in-depth study comparing services provided by untrained and trained dais could be attempted to show the effectiveness of *dai* training.

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