16. Obstetric Forceps

In this response, our amazing volunteer Gillian tells the story of a pair of steel birthing tongs currently on loan to The MERL from the Berkshire Medical History Centre across the road. Because she volunteers at both locations, Gillian is well-placed to recount the extraordinary history of these fascinating objects and to bring the story of mid-century rural childbirth to life.

Stainless steel obstetric forceps, 1950s

Obstetric forceps currently on loan to The MERL from Berkshire Medical Heritage Centre (BMHC 2010.16.15)

One of the cabinets in the 'Rural Healthcare' section of the Museum contains a general practitioner's bag with the instruments that would have been in it in 1951. These are on loan from the Berkshire Medical History Centre which is based at the Royal Berkshire Hospital in Reading. The obstetric forceps from this set of material has been chosen as one of the 51 Voices project selections. The reason for this choice is that they appear to be the item that has had the largest impact on delivering babies. We will be looking at the evolution of the management of childbirth with specific reference to the forceps, the medicalisation of childbirth, and the formation of the National Health Service (NHS) in 1948. As these responses are not intended to be comprehensive and complete accounts, it is worth noting that this piece will not explore maternal and foetal mortality, puerperal infection or perinatal

mental health challenges, ante- and post-natal care but we acknowledge that these have been and continue to be an integral part of childbirth.

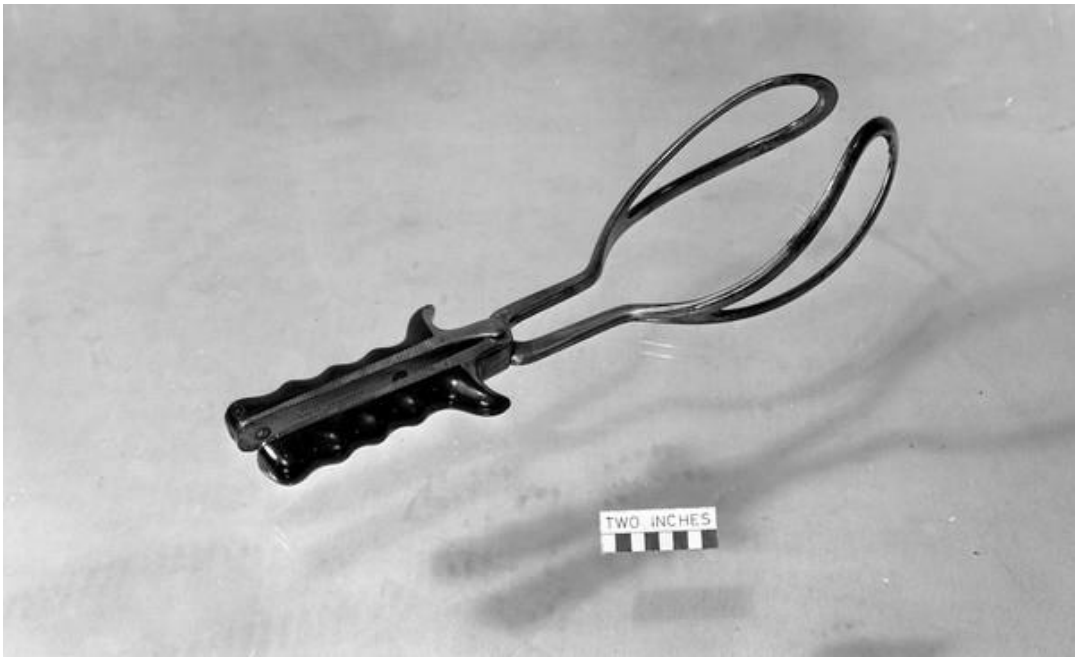
The forceps (top left in display case) on display in the 'Rural Healthcare' display, alongside other artefacts on loan from the Berkshire Medical Heritage Centre and selected objects from the MERL Collection.

What are obstetric forceps?

Obstetric forceps date back to the sixteenth century and are used to assist the birth of a baby when the second stage of labour has failed to progress or the second stage needs to be expedited because the baby is distressed.

Obstetric forceps comprise of two blades which are positioned around the head of the baby during childbirth. The blades cross at a mid-point, where there is usually a locking mechanism. The blades generally have two curves, one that is shaped to fit comfortably around the baby's head, and the other which conforms to the shape of the birth canal. The idea is that the two halves could be separated for insertion individually into the uterus then joined together and locked ready for use. Some early models were made from wood wrapped in natural leather coated with lard.

Later models were made of steel and some had leather handles. The second half of the nineteenth century saw the rise in thermal sterilization of surgical instruments. This resulted in dozens of steel and organic instruments being replaced by all-metal instruments protected by copper or nickel plating. Stainless steel began replacing nickel-plated instruments in the 1920s and 30s. The use of obstetric forceps requires a great deal of training, which was only available to doctors. Therefore, it was the doctors who used the forceps. The obstetric forceps in the display are made of stainless steel and date back to the 1950s.



This pair of near-identical forceps dates to the late-nineteenth century. This pair was designed for midwifery and repurposed for use as lambing tongs rather than only being used for human births. They are from The MERL collection and can also been seen on display in the Museum (MERL 61/228/1-3).

A history of obstetric forceps

The invention and development of obstetric forceps can be attributed to five generations of the Chamberlen family (1560–1728) Originating in France they fled religious persecution and arrived in England in 1569. It is believed that the forceps were invented by the eldest son, Peter the elder (c.1560–1631) and then modified by successive members of the family, all of whom were surgeons and practitioners of midwifery. The Chamberlens went to extraordinary lengths to keep their invention secret, which they did for one hundred years. It is said, that they would arrive at the house of the woman in labour with the forceps in an enormous decorated wooden box which two people carried. The woman was blindfolded and other people had to leave the room before the forceps were removed from the box. The people outside would hear strange sounds of bells and whirring emanating from the room, believing that a machine was being used to deliver the baby. With no male heir, it is likely that the last Chamberlen, Hugh the younger (1664–1728) let the secret leak out in the latter part of his life.

William Smellie (1697–1763), a Scotsman, continued to develop and improve the forceps and their use in Britain. He studied pelvic measurements and modified the forceps' design to reduce the damage to the baby.

James Young Simpson (1811–1870), Professor of Midwifery from 1840, refined the forceps, producing one of the designs still in use today. These forceps work on the assumption that the baby's

head is facing the mother's back. In 1916 Christian Kjelland, a Norwegian obstetrician designed rotational forceps which could be used when the baby's head was in different positions.

The invention of the forceps came at an important time in the advance of the management of childbirth. A new disease—Rickets—was becoming widespread, leading to pelvic deformity, which in the expectant mother made childbirth very difficult. Prior to the invention of the forceps midwives had managed obstructed labours in different ways. Some of which led to the death of the baby and/or mother. The invention of the forceps reduced the death rate of the mother and baby. However, there is a risk of damage to both the mother and baby.

In the twenty-first century, several designs of forceps are used for different presentations of the baby.

The evolving role of the birth attendant

Throughout history women in childbirth have been attended by women. These may have been female relatives or a midwife. The term midwife is Anglo-Saxon and is derived from mid, "with" and wyf "woman". The midwife appears to have had autonomy in practice and status, being a trusted member of the community. She was respected for her knowledge and skills and was able to earn a living. Her knowledge was gained by being apprenticed to a midwife, learning through verbal communication and experience.

In the 1500s people began to study anatomy from a scientific point of view. Diagrams and drawings of the female reproductive system began to introduce a scientific element to childbirth. At that time women were generally excluded from scientific discovery so the midwives did not impact on the development of understanding or techniques. As scientific interest grew, so did the part that men played in the process. At the beginning of the 1700s the role of *accoucheur* or "man-midwife" emerged. These were qualified medical practitioners who took an interest in child-birth. Unlike their female counterparts they were trained to use forceps at difficult deliveries, when the forceps came into the public domain in about 1733. By the mid-1700s accoucheurs were the most highly paid practitioners employed by the upper classes and seen as more prestigious than female midwives. The working classes continued to be served by the local lay midwife or "handywoman". The scientific knowledge acquired by the men was considered far superior than the hands-on experience acquired by the women. Naturally the midwives were opposed to these developments, but because they all worked individually and in isolation, they had no way of challenging the men as a cohesive group.

The 1800s saw significant changes in the management of childbirth. Pregnancy began to be seen as having pathological possibilities and therefore, was considered not to be safe in the hands of midwives, male or female. Various groups tried to take control of the organisation and education of midwives in Britain. "Midwifery" became a compulsory subject for medical students, who were all

men, women being excluded from university. Two all-female training colleges were set up to train female midwives. The Trained Midwives' Registration Society was formed to promote the recognition of midwifery as a respectable profession. Later known as the Midwives' Institute, it was instrumental in bringing about the Midwives' Act of 1902, which made the training of midwives compulsory, to stop the perpetuation of attendance at birth of the lay midwives. However, training cost money and many working-class women could not afford to train. Thus, they continued working in the poorer areas well into the twentieth century.

Into the twentieth century and beyond...

The twentieth century saw many changes in the role of the birth attendant and of the equipment used to assist with difficult deliveries. Various acts of parliament were introduced with the aim of making training for midwives compulsory, ensuring that all midwives were adequately supervised, that they had to be registered to practice and that they were salaried. Ante-natal care was introduced, so that by 1935 80% of pregnant women were receiving antenatal care. In 1911 the National Insurance Act stated that workers had to make a weekly compulsory payment entitling them to a "Panel doctor" and to sickness and maternity benefits. The biggest change in the twentieth century came through the formation of the NHS in 1948. This gave all pregnant women access to free ante-natal, delivery, and post-natal care.

Photograph from a series showing the activities of 1940s midwife and health visitor Jean Young, the working life of whom was the subject of a feature in *Farmers Weekly* magazine (MERL P FW PH1 S/G/75170).

The NHS offered all pregnant women free ante-natal care from both a doctor and a midwife. This brought immense relief to women who were struggling in poverty. At this point GPs began to see women regularly through their pregnancy for which they were paid by the NHS. This tended to mean that they left delivering the baby to the midwife because their payment by the NHS was not

dependent on them being present at the birth. Until this point the majority of births took place at home. In 1900 95% of births took place in the home, in 1927 it was 85%, in the 1950s-60s it was 50%, by the 1970s it was about 20% and by the 1990s it was about 2%. Many women welcomed the move to hospital births because it included effective pain relief in labour, foetal heart monitoring and quick access to emergency assistance, should it be needed. In 2019 2.1% of births in England and Wales took place at home. However, a home-birth with midwife-led care is popular with some women and is seen as very modern, but it is what happened in the 1950s. Is childbirth location going full circle?

Where did the expectant father fit into this? Until the 1970s the expectant father was actively discouraged from being present at the birth. However, since the 1970s this has changed and in 2021 it is unusual for a woman not to have a birthing partner with her. This may be the baby's father or it may be a female partner, relative, or friend. The Covid-19 pandemic of 2020–2021 has resulted in various changes to the management of ante-natal and childbirth care and the involvement of the partner. Initially the presence of partners was restricted but in December 2020 the guidelines changed so that the pregnant woman should be permitted to have one person beside her at "all stages of their maternity journey." This is guidance only though, and decisions depend on the local NHS Trust. The request for home births increased as people felt safer giving birth at home than in a hospital where there was a risk of contracting Covid-19. Some areas were able to meet this need and others were not.

Rural childbirth

There is relatively little information available about rural child birth. The options open to the pregnant woman regarding the location of the birth are similar to those of the woman living in an urban area. The conditions that people lived in could also be said to be similar. There were people in urban areas who were wealthy and there were people who lived in extreme poverty. In the BBC series "Call the midwife", which is set in the east end of London at the beginning of the NHS, scenes of considerable poverty are portrayed, and are said to be extremely realistic. These would be replicated in rural areas, contrasting with the lives of the middle- and upper-class people who lived in comfort. These differences would be echoed in the experience of pregnancy and childbirth.

Before the formation of the NHS most births took place at home. Either a midwife, handywoman, or doctor (GP) would be present, or perhaps a combination. The midwife and the doctor had to be paid for, so lower class and some middle-class women had their babies at home attended by the handywoman, also known as "the woman you called for". She was likely to be an older woman, a respected member of the community. Sometimes she provided a home-help service to the newly delivered mother, taking in washing and helping with the children and housework. Childbirth was

not seen as a medical process and therefore the doctor was not called unless it was an extreme emergency because the mother could not afford to pay the fees. After 1902 Maternity Act, when all midwives had to be trained and certified, it was illegal for a handywoman to deliver a baby unless she was supervised by a doctor. This caused a great deal of animosity between the handywomen, the midwives, and the pregnant women. In some rural areas where there were no certified midwives the doctors continued to give the handywomen official cover. At times this was interpreted rather loosely, with the doctor visiting the following day, unless there had been an emergency. The 1926 Maternity act made it illegal for the handywomen to practise even with the supervision of the doctor, but some continued practising into the 1930s. In 1928 a debate was held on Maternal Mortality. One of the many recommendations made was that midwives in rural areas should be provided with small cars as the distances covered were too great for a bicycle and if they rode a motorbike, they would arrive wet and dirty.

The rural midwife and health visitor Jean Young attends a house call in the 1940s (MERL P FW PH1 S/G/75173).

People with money could afford the midwife and the doctor. Or they gave birth in a nursing home. In rural areas the midwife would sometimes move into the house for a couple of weeks, attending the birth and then caring for the mother, baby, and family during the ten day “laying in” period. This was a period of time when the mother stayed in bed to recover from the birth. This practice was stopped in the 1950s after it was acknowledged that bed-rest could lead to deep vein thromboses.

The midwives who worked alone were very skilled. If there was a breech presentation, they generally took it in their stride and delivered the baby safely. Often if they called a doctor, he had no more training and possibly less experience than the midwife. One emergency the midwives sometimes

needed medical assistance with was severe haemorrhaging. There have been occasions, before everyone had a telephone, when rural midwives have had to send the husband several miles to a post office, to use the telephone to contact the doctor. When carrying out home-deliveries midwives and doctors sometimes had to be resourceful e.g. using a hat-stand to hold a bottle of blood that was being used for a transfusion. At times the relatives of the newly delivered woman were so grateful that they would give gifts. One GP in a rural practice was given a sheep by a local farmer, which then lived in the GP's paddock.

With the introduction and evolution of the NHS rural childbirth followed the same changes as that in the urban areas. By the twenty-first century women theoretically had a choice of where to give birth; a hospital obstetric unit, a midwife led unit in or near the hospital, a community birthing unit, or at home. Living in a rural area the woman's choice might be restricted by the availability of local resources. Research has shown that most rural women prefer delivery in a maternity unit to home birth, covering every eventuality and increased safety. Although women prefer shorter travel times, they are willing to travel for approximately two hours to get their preferred choice. However, the best laid plans sometimes do not work out. The distance to the hospital may mean that even if the ambulance arrives at the rural location in time that the baby may be born either at home or on the way to the hospital. Ambulances have been known to park up beside rural roads so that the baby can be delivered. In holiday destinations such as the Yorkshire Dales, for example, the amount of traffic during the summer can cause long delays to both ambulances and midwives. On one documented occasion a pregnant woman realised during the night she was in labour and there was not time to get medical help. As a shepherdess she was accustomed to delivering lambs, so delivered the baby herself while the rest of the family were asleep.

Midwives caring for women in isolated and remote settings are faced with several challenges. They need to be skilled and confident in their clinical skills to work alone. Centralisation of services can mean long travel distances for midwives and for women. This is time-consuming and can impact significantly on midwives' workload and the number of women seen within the day. The quality of roads to rural and isolated locations, and weather conditions impact on travel. The nearest maternity unit can be more than 40 miles away from a woman's home. For some women and their partners travel may be less of an issue, particularly for those who have chosen to live in rural areas and have the resources for private transport. However, many women and families are on low incomes without access to a car or the means to travel frequently. Poor public transport can limit access to routine antenatal care.

Alongside the obstetric forceps, The MERL's 'Rural Healthcare' displays tell the stories of two midwives. We briefly delve into their stories here:

Georgina Pullen: A rural midwife in the early-twentieth century

Georgina was born in Kensington in 1873. On 27th May 1904, age 31, she became a midwife with a recognised qualification from the London Obstetric Society (LOS). On 29th September 1904 she was enrolled on the Central Midwives Board (CMB) Roll of Midwives. The first roll of Midwives was published in 1905 and Georgina was on it, living in Upper Clatford near Andover. The CMB laid down regulations about the clothing and equipment considered essential to practice as a midwife. It has been estimated the cost of the equipment and the lined midwifery bag would have been 1 guinea, which was a huge amount of money. The cost of the training would have put it out of reach of working-class women. Georgina had a brass plaque on the wall of her house which stated "Mrs Pullen, Midwife, L.O.S. C.M.B. Trained nurse."

A first aid kit, as carried by early-twentieth-century midwife Georgina Pullen (MERL 2004/17).

Initially, Georgina practiced from her home in Upper Clatford. We know this because all registered midwives had to keep a notebook in which they recorded when they sent for medical help. The notebook was issued by the CMB and was "A record of sending for help". One case recorded in the notebook states that on "October 16th (year not stated) that Dr Farr had been sent for on behalf of Mrs Bell who had a ruptured perineum."

In 1907 Georgina gave birth to a daughter, Mary. Sadly, the following year in 1908 Georgina's husband Wallace died, aged 30.

By 1911 Georgina, Mary and a servant, Edith, had moved to Hambleden in Buckinghamshire. The census of that year has them living in a house with five rooms. Georgina is listed as a Self-Employed Certified Midwife and Sick Nurse. The first record in the notebook for Hambleden is "June 25th (no year) sent for Dr Peake on behalf of Mrs Murkett, Face presentation". The next entry in the book notes that Georgina is now called Cook. Again, the date has no year. Help was sent for because the pregnant woman had "prolonged second stage". This may have been an occasion when obstetric forceps were used. On July 31st 1917 the entry states "Sent for Dr Wilson on behalf of Mrs Butler, Rise of temperature and quick pulse on 6th day". This would suggest that Mrs Butler had puerperal fever. There is one more entry after this, when the doctor was called to a woman with "post-partum faintness". There is no information about when Georgina stopped practising as a midwife. In both places she worked she delivered babies both in her village and further afield. It would be interesting to know how she travelled. Perhaps it was by bicycle.

Georgina Pullen's midwifery equipment, as displayed in the 'Rural Healthcare' section of the Town and Country gallery at The MERL (MERL 2004/18-25).

In the 1939 Register—this being a list assembled prior to the start of the Second World War to ascertain where people lived in preparation for provision of ration books—Georgina and her husband Thomas Cook, plus Georgina's daughter Mary are all listed as living in Pheasants Hill, Hambleden. Georgina was 66 and described as "doing unpaid domestic work". Thomas was described as a retired butcher. Thomas had trained as a butcher in Henley and had then run the butcher's shop in Hambleden. His first wife, Hannah died in 1913, leaving him with two sons. Thomas died in 1944 and Georgina in 1953.

Jean Young: A rural midwife in the mid-twentieth century

In 1947 Jean Young, a rural midwife (ca.1917–unknown) described her job: midwife for expectant mothers, nurse to every new baby, health visitor for under-fives, and nurse for the elderly. Every day

she left a slate on her door indicating where in the community she was going to be. She used a car to reach parts of rural Berkshire under her care. She might need to change dressings, give insulin to a diabetic, or run a clinic for up to forty mothers. This was hard work but Jean liked the countryside and found it friendly. Comparing urban with rural, she noted that 'town nursing is in compartments, here I cope with everything'. Even in the 1940s Jean used very similar equipment to that use by Georgina Pullen.

Jean Young runs a rural clinic, offering check-ups for infants in her area (MERL P FW PH1 S/G/75164).

Further Information:

For more about the Berkshire Medical History Centre see – https://www.royalberkshire.nhs.uk/get-involved/medical-museum.htm

For information about the obstetric forceps held in the MERL collection see – MERL 2012/283/1-4

For more about the Year on the Farm gallery where The MERL forceps are on display see – Year and Country gallery

For more about the Town and Country gallery where the 'Rural Healthcare' section features, the BMHC forceps are displayed, and Georgina Pullen and Jean Young both feature, see – Town and Country gallery

For more about objects belonging to Georgina Pullen see – Georgina Pullen Collection