The Netherlands is not only famous for its tulips and windmills, its maternity system is just as outstanding. The Dutch tradition of a free choice of place of birth including home birth is quite unique in the western world. This leaflet will provide you with lots of information about the Dutch maternity and midwifery system, and touches upon some of the challenges we face.

Facts

<table>
<thead>
<tr>
<th>Inhabitants</th>
<th>16,780,566 (November ´12, CBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active midwives</td>
<td>2612, 27% work in a hospital (´11, Nivel)</td>
</tr>
<tr>
<td>Total Fertility Rate</td>
<td>1.80 (´10, CBS)</td>
</tr>
<tr>
<td>Maternal age at birth of 1st child</td>
<td>29.4 years average (´10, CBS)</td>
</tr>
<tr>
<td>Births</td>
<td>180,060 (´11, CBS) primips 45.1% (´08, PRN)</td>
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<tr>
<td>Home birth</td>
<td>23.4% (´08-10, CBS) 29.4% (´05-07, CBS)</td>
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<tr>
<td>Birth in primary care</td>
<td>32.8% (´08, PRN)</td>
</tr>
<tr>
<td>Referral during birth (1st → 2nd level)</td>
<td>32% (´07, PRN)</td>
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<tr>
<td>Induction of birth</td>
<td>15.5% (´08, PRN)</td>
</tr>
<tr>
<td>Caeasarean section</td>
<td>15.4%, 74% in case of breech (´08, PRN)</td>
</tr>
<tr>
<td>Vaginal birth after caesarean (VBAC)</td>
<td>54% (´02-03, NVOG)</td>
</tr>
<tr>
<td>Epidural pain relief (1st stage of birth)</td>
<td>11.3% (´08, PRN) 6.2% (´04, PRN)</td>
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<tr>
<td>Maternal mortality</td>
<td>8.1/100,000 live births (´08, PRN)</td>
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<tr>
<td>Perinatal mortality (22 wks – 1st wk)</td>
<td>9.1/1000 live births (´08, PRN)</td>
</tr>
<tr>
<td>Perinatal mortality (28 wks – 1st wk)</td>
<td>4.8/1000 live births (´08, PRN)</td>
</tr>
<tr>
<td>Women who start with breast feeding</td>
<td>75% (´10, TNO)</td>
</tr>
<tr>
<td>Women who breast feed 6 months pp</td>
<td>18% (exclusive BF ´10, TNO)</td>
</tr>
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</table>

Structure

In the Netherlands, maternity care is organised in a so called primary, secondary and tertiary care model. The primary care, for low-risk women, is formed by midwives and GPs. GPs are responsible for only about 0.5% of all births, mainly in rural areas with a low population density (´11, Nivel). The secondary care consists of obstetricians and specialized ‘clinical’ midwives in general hospitals and the tertiary care comprises obstetricians in academic hospitals.
Risk selection, a clear distribution of tasks and a close mutual co-operation between these different strata forms the strength of the Dutch system.

The principle idea is that a healthy woman with a healthy pregnancy (low-risk) is best taken care of by a midwife. This minimises her chances of receiving an unnecessary intervention of any kind, gives her a high standard of care and is furthermore very cost-effective.

The midwife guiding a woman through her pregnancy, birth and puerperium is autonomous in her actions and decisions. Emphasis is placed on natural processes, with intervention only occurring when a problem arises. In this case, the midwife will consult or refer to an obstetrician.

**Obstetric and Midwifery Manual**

Since 1959 a comprehensive list of pre-existing, pregnancy- and perinatal-related disorders has existed, in which:

- **A** the care of a primary care midwife is considered sufficient
- **B** an obstetrician should be consulted
- **C** the care definitely has to be shifted to an obstetrician
- **D** the natal care should be given in a hospital but can be supervised by a primary care midwife

This manual, called the ‘VIL’, optimises the risk selection and referral and is formulated in a dialogue between primary, secondary and tertiary care professionals. It should be noted, however, that the manual is a guideline, and health professionals have the option to make autonomous decisions.

Some examples:

- **A** Previous miscarriages, previous premature birth (>33 weeks), cystitis.
- **B** Anaemia, PIH, psychiatric illnesses, hepatitis C.
- **C** Diabetes mellitus, previous CS (from the 37th week of pregnancy), >24 hours of ruptured membranes, meconium-stained liquor, breech birth, multiple birth, third or fourth degree tear.
- **D** Previous PPH (>1L), previous retained placenta (manually removed).
The manual is currently being updated by midwives, GPs, obstetricians and government authorities. The current version dates from 2003, and an update is expected in 2013. Unfortunately, there is not an English translation of the manual available. The Dutch version can be found here.

Education
There are three academies for midwifery in the Netherlands, in Amsterdam (our capital), Rotterdam and Maastricht. The first one also has a satellite in Groningen, in the north of the Netherlands. These academies are all part of universities for applied sciences:

Midwifery Academy Amsterdam and Groningen
(Amsterdam university of applied sciences)
Midwifery Academy Maastricht
(Zuyd University)
Midwifery Academy Rotterdam
(Rotterdam University of applied sciences)

Dutch midwives have not been trained as nurses! A Dutch nurse cannot work as a midwife and vice versa.

Altogether, there are two years of theory, one year of primary care internships and one year of secondary and tertiary care internships. The internships are spread equally over these four years. Students are primarily trained to become independent primary care midwives.

190 Students enrol each year nationwide. They have had an extensive assessment which selects the best candidates. Around three times more candidates apply for the course than places are available.

The tuition fee is set by the government and is €1735,- for Dutch students for the year 2012-2013.
Students from abroad may be accepted when they are proficient in Dutch (NT2, level 2) and after their diplomas have been assessed. Since there are many Dutch midwifery students that need placements for their training, it is difficult to arrange an internship for foreign student midwives. For more information please contact the KNOV at info@knov.nl.

University level?
To maintain the strong autonomous position of Dutch midwives and the high level of care for low-risk women, it is important that midwives are empowered by being academically trained to a high standard. Attempts to bring the midwifery training to degree level are still in progress.

Advanced education
A Dutch midwife who wants to continue her education has the following options:

- Master of science in midwifery (University of Amsterdam)
- European master of science in midwifery (Midwifery Academy Maastricht)

These two masters prepare midwives to work in the field of research and management.

- Master physician assistant (HRO, Rotterdam)
- Clinical midwife (UMC, Utrecht)

These two masters educate midwives to work in a hospital. They must have employment in a hospital before they can enroll.

- Teacher in midwifery, first degree (VU, Amsterdam)

Nuffic, a Dutch institute for international cooperation in higher education, recently launched a website for foreign students with lots of information.

Dutch midwifery research
Nearly 3% of all Dutch midwives have completed a master in midwifery science. So far, twelve midwives have acquired a doctorate in midwifery science and several midwives are working on their thesis.

Two academies, Amsterdam/Groningen and Maastricht, have already employed a professor in midwifery. Eileen Hutton from Canada and Raymond de Vries from The United States both strengthen the field of midwifery science in the Netherlands.
The Royal Dutch Organisation of Midwives, the KNOV, has initiated a special Midwifery Science Board in 2011. It will stimulate evidence based midwifery by providing talented midwives with a PhD scholarship and by supporting efforts to bring the midwifery training to degree level.

If you are interested in midwifery science in the Netherlands, there are several research initiatives that can provide you with more information:

**Year index midwifery research 2011**
- Kennispoort Midwifery
- Midwifery Research Network
- Consortium for women’s health and reproductivity studies
- Netherlands institute for health services research (NIVEL)

**Midwifery Science (Midwifery Academy Amsterdam and Groningen)**
- Studies in progress

**Academic Collaborative Centre (Midwifery Academy Rotterdam)**
- Studies in progress

**Midwifery Science (Midwifery Academy Maastricht)**
- Studies in progress

**Registration as a midwife**
After finishing her education, a Dutch midwife is obliged to register in a nationwide register for health professionals before she can actually work as a midwife. The cost for this registration is €80,. Her title, ‘verloskundige’, is legally protected.

This so called BIG-register is open to the public. A midwife needs to renew her registration every five years. The most important requirement for on-going registration is a minimum amount of hours spent working as a midwife (2080 hours in five years).
Quality regulation

The KNOV, the Royal Dutch Organisation of Midwives, has initiated a quality register for midwives in 2006. Registration is not compulsory, but around 80% of all midwives have registered so far. To maintain her registration, a midwife has to have a portfolio showing a minimum of 200 hours of training and additional education over a period of five years. The KNOV has also initiated a register for midwives who have advanced training and experience in external cephalic version of the foetus (ECV). 75 Midwives have registered so far. To maintain her registration, a midwife has to perform a minimum of ten ECV’s per year. The quality of Dutch midwifery is also externally monitored by a government authority, the Health Care Inspectorate.

Working in the Netherlands

Midwives from abroad who are interested in practicing midwifery in the Netherlands should be able to communicate in Dutch (NT2, level 2). Their diplomas will be required to be assessed by the ministry of health, this procedure is free of charge but requires quite a lot of paperwork. Depending on competencies and experience, it may be necessary to follow an additional course, which gives an introduction into Dutch midwifery. The midwifery academy of choice will offer the candidate a customized program. If a midwife from abroad wants to work in the field of education, research or management, it is not necessary to register with the ministry of health. Some midwives from abroad create their own employment as a doula or as a childbirth educator for expats.

If you are interested in a personal acquaintance with the Dutch midwifery system, please contact the KNOV, info@knov.nl.

Midwifery practices

There are 519 primary care, independent midwifery practices in the Netherlands ('11, Nivel). Most primary care Dutch midwives work in group practices, often with two or three colleagues. Together they provide care for hundreds of women each year. They often have their own premises and offer prenatal clinics during the week. Each practice has a midwife on call 24/7, with each midwife’s shift normally lasting for 24 hours. During this shift, a midwife combines both postnatal visits at home and natal care, at home or in hospital. If she cannot visit
one client in labour because she is assisting another client, she will call a colleague from her own or a neighbouring practice to attend to her client. 5.4% of primary care Dutch midwives have a solo practice. Often they have an agreement with a neighbouring practice to occasionally cover for them in order to allow them to have some time off. To enable them to take holidays, they usually won’t accept new clients for a certain period each year. 12% of all active midwives are locums. These are mostly midwives who have just finished their education. 27% of all active midwives work in a hospital under the supervision of an obstetrician. They are called clinical midwives.

There is a Dutch institute for health services research, Nivel, which publishes a yearly report about Dutch midwives. Email address: nivel@nivel.nl

Finances and insurances
Every midwifery practice has several contracts with different health care insurers. Everybody in the Netherlands is obliged to insure oneself for standard care; midwifery care is included. The standard insurance for an adult is partly received through taxes. Additional to this the individual costs are around €1100,- plus an income related contribution of up to €500 per year. Children are covered free of charge until the age of eighteen. Practices have a free choice in how to arrange antenatal care. Often they will see their clients around ten to twelve times, each consultation lasting for 10 to 45 minutes. Some practices incorporate a home visit at around 35 weeks of pregnancy, which is a recommendation from the government but comes without financial compensation for now. If care is only given for part of the pregnancy, due, for example, to miscarriage, change of midwife or referral to secondary care, only that part of the pregnancy can be claimed under the health insurance. There are fixed prices for several durations of care. The price for natal care is always the same, no matter how long the birth takes or whether the woman stays under the care of a midwife or is referred to an obstetrician. Natal care starts when the membranes rupture or if a woman has contractions.

Midwives obtain the following amounts for their given care (2012):
Antenatal € 441,92
Natal € 480,33
Postnatal € 266,85
Total: € 1189,09

These amounts are yearly adjusted by the Dutch Healthcare Authority.
The financial compensation given for postnatal care is also always the same, no matter whether the midwife visits the client only once or several times. A visit is often scheduled every other day for seven or eight days after birth and takes between fifteen minutes and one hour to complete. The midwife works closely together with a maternity assistant during the postnatal period. If a midwife works fulltime, within a year she will take care of the antenatal, natal and postnatal care for approximately 105 women.

As an independent midwife, you need to have indemnity insurance. For about €350 annually you are insured for claims up to €1,250,000. It is easy to get such insurance, though you need an agency to arrange it for you. It is very rare to get confronted with a claim, as Dutch judges are very reluctant on this matter. Many midwives also choose to have invalidity insurance in case they are sick. Independent midwives are obliged to contribute to a retirement fund for midwives, which is quite a unique situation in the Netherlands.

### Ultrasound scans and antenatal testing

Every low-risk woman is offered two ultrasound scans; one in the first term to set a due date and one anomaly scan at twenty weeks. There needs to be a medical indication to have additional ultrasound scans. The scans are sometimes made by the midwife herself in her own practice, otherwise the woman is referred to a primary care ultrasound centre.

If there is a higher risk for congenital anomalies, the twenty week anomaly scan is performed in a hospital that has a specific license for antenatal testing. Currently there is a lively debate about whether or not an extra scan around thirty weeks would reduce perinatal morbidity and mortality by detecting intra uterine growth retardation. Research is being done on this matter.

Each pregnant woman is informed about the combination test, which calculates her risk of being pregnant with a Down’s, Edward’s or Patau’s syndrome baby. Low-risk women (e.g. younger than 36 years in their 18th week of pregnancy) have to pay for this test themselves. The cost is around €130,– and some insurance companies will cover this. The screening is performed at the same time...
primary care centre where the low-risk pregnant woman goes for her ultrasound scans. In cases of a result with a risk higher than 1:200, the client is subsequently offered a chorionic villi sampling or an amniocentesis. These antenatal tests are always performed in a hospital that has a specific licence for this purpose. The costs are completely covered by the standard health insurance. If the foetus suffers from a medical condition from which it will certainly die during or shortly after birth, or if it will be seriously handicapped, the parents have a choice to terminate the pregnancy until 24 weeks.

**Choice of home or hospital birth**

Low-risk women may choose whether to give birth at home or in a hospital (outpatient clinic). This free choice for the place of birth is almost unique in the (western) world and is an important pillar of the Dutch maternity system.

If a woman chooses a home birth, her primary care midwife will attend her birth, aided by a maternity assistant. The insurance company usually provide a maternity box, which contains bed protectors, maternity pads, gauze and sterilizing alcohol amongst other necessities. The midwife will bring her own equipment, which always includes a neonatal resuscitation set and oxygen. If complications arise, the midwife will refer to an obstetrician or paediatrician. Every hospital in the Netherlands accepts these referrals from primary care midwives. A midwife will use an ambulance for transport in high risk situations. On average this ambulance will reach the client in just ten minutes (‘11, Gezondheidsraad).

The most common reason to refer a woman during birth is meconium stained liquor (21.8% of all referrals), followed by slow progress during first stage of labour (16.2%) and slow progress during second stage of labour (10.7%) (‘08, PRN). If a low-risk woman opts for an outpatient birth she has to pay the hospital around € 325,-. Some health insurances will cover this expense. Her birth is attended by the same primary care midwife that attended her pregnancy and would give her natal care at home. The midwife is assisted by an (obstetric) nurse
who is employed by the hospital. Some hospitals employ maternity assistants for this purpose. Usually, women will leave the hospital a couple of hours after birth. Women who have an increased obstetrical risk give birth in hospital, without extra costs to themselves. A secondary or tertiary care professional will attend them during birth. This is either a clinical midwife, a general doctor or an obstetrician in training. They will call upon an obstetrician if a serious complication arises.

There has been an extensive cohort study about the safety of Dutch planned home birth versus planned outpatient hospital birth, which included nearly 530,000 low-risk women. It was published in the BJOG.

**Pain relief**

Dutch midwives minimise the need for medicinal pain relief by offering honest information during pregnancy and a high quality of continuous support during birth. Currently, there are pilots to implement gas and air pain relief, which could be administered under the supervision of a primary care midwife. Since it is necessary for health reasons to have an adequate system of ventilation, such pain relief would only be available in a hospital or birth centre. There are also pilots researching the use of sterile water injections to use as pain relief in primary care, these could also be administered during a birth at home. Medicinal pain relief is generally used in prolonged labour. When a woman is in need of medicinal pain relief, an obstetrician is consulted. Depending on the situation, a choice is made for minor pain relief or epidural analgesia.

In general there are three types of medicinal pain relief used in the Netherlands, all of which are administered in hospital:

**Epidural analgesia** – This type of pain relief is always administered by an anaesthesiologist. Sometimes this specialist will come to the delivery room, in other hospitals the woman is brought to the operation complex. The Dutch association of anaesthesiologists agreed on the 24/7 availability of epidural pain relief for women in labour a few years ago. A woman who has an epidural is always under the responsibility of an obstetrician.
**Pethidine i.m.** – An obstetrician can prescribe pethidine, sometimes combined with sleeping medication. A nurse gives the woman the medicine and it depends on the hospital protocol whether the primary care midwife will continue the care immediately, after four hours, or that the woman gives birth under the responsibility of the obstetrician.

**Remifentanil PCA i.v.** – This medication is given in a couple of Dutch hospitals. There have been some incidents of maternal breathing problems and that is the main reason that other hospitals don’t offer it at all or only offer it in a research setting. When remifentanil is given, the responsibility for the delivery is always shifted to an obstetrician.

**Maternity services**

During a home birth, the midwife is assisted by a maternity assistant, ‘kraamverzorgster’ in Dutch. She supports the mother during her labour, assists the midwife at birth, takes care of the mother and her baby and tidies up the delivery room.

For the eight days following the birth, she will attend to the care of the mother and the newborn. She performs medical checks, supports breast feeding, gives information, takes care of light household chores, prepares meals and takes care of other children if necessary.

Obviously she is not only of great significance for the new parents and their baby, but also for the midwife!

Every mother is entitled to 49 hours of this type of maternity care, 24 hours being the legal minimum. The amount of hours is calculated individually, depending on factors such as hospital stay, choice for breast feeding and health problems.

The basic health insurance covers the expenses for the maternity assistant, apart from €4,- per hour which the parents have to pay themselves. Sometimes the health insurance will also cover these costs, if the parents have paid for additional coverage.

The maternity assistant has completed a vocational education and training for three years. She is an employee at a maternity care organisation or she can be self-employed.
Maternity leave
Dutch working women have a minimum of sixteen weeks of maternity leave. A woman can choose to start her leave at 34 or 36 weeks of her pregnancy, but not later. She always has a minimum of ten weeks of maternity leave after birth. So if she gives birth beyond her due date, she sometimes gets seventeen or even eighteen weeks of paid leave.
If a woman is self-employed, the government will pay her a minimum wage for sixteen weeks. Often, these women (many midwives!) have an invalidity insurance which covers her income during maternity leave.
When a breastfeeding woman resumes work, she is entitled for nine months to use up to a quarter of her working hours to nurse the baby or to extract breast milk. The employer has to provide her with a separate room for this purpose or has to allow her to visit her baby.

Fathers receive only two days leave, the day of birth excluded.

Registration of perinatal data
All maternity caregivers; midwives, GPs, obstetricians and paediatricians, register their antenatal, natal and postnatal care and results. 96% of all births are registered in this system (08, PRN). The data are collected and analysed by the PRN, the Dutch perinatal registration, which is a governmental institute.

Obtaining data
If you want to obtain data about healthcare, midwifery and obstetrics in the Netherlands, you can consult several organizations:

EuroStat (European Commission)
National Public Health Compass (Ministry of Health)
Netherlands institute for health services research (NIVEL)
The Health Council of the Netherlands
The Netherlands Perinatal Registry, info@perinatreg.nl
StatLine (Central Bureau for Statistics)

Current debate
There is currently an intensive and serious debate in the Netherlands about the improvement of maternity care to further reduce perinatal mortality and morbidity. In a global perspective the Netherlands has a low perinatal mortality rate and it is still decreasing. A few years ago however statistics showed that it is relatively high compared to other European countries.
Partly, this can be explained by the differences in the quality and content of registration. An example is the Dutch registration of foetuses with a minimal birth weight of 500 grams as perinatal deaths, compared to a minimum of 1000 grams in some other European countries. Furthermore, a relatively high maternal age and smoking during pregnancy can partly explain the differences. As well as a reluctance to actively support extremely premature neonates (22-24 weeks). Extensive research of nearly 530,000 births in the Netherlands of low-risk women shows no differences in perinatal morbidity and mortality between planned home births and planned outpatient hospital births, both under the supervision of a midwife.

Some believe in a concentration of hospital maternity facilities to improve outcomes. Yet others oppose this because of the increased distance for clients to specialised care. Another consequence of concentration of hospitals could be the uneven distribution of specialists (obstetricians, anaesthesiologists and paediatricians) in the country, which would in turn reduce the freedom of choice for clients.

Another debate has recently developed concerning the integration of primary and secondary care. Referral rates are increasing and some have the opinion that the dichotomy between midwives and obstetricians should be abandoned, whereas others believe that this same dichotomy protects women against unnecessary medical interventions.

The overall challenge is to offer a high standard of maternity care (24/7) without losing the benefits of unique characteristics, such as the freedom of choice including homebirth and low medical intervention rates.

The June 2012 vision statement of the KNOV clearly shows its position in these matters. An English version will soon be available.

**International affairs**

The Netherlands is a country with a long history of autonomous, independent midwifery. This makes it an ideal location for international organisations in this field. ICM, the International Confederation of Midwives, has its headquarters in The Hague, our administrative capital. EMA, the European Midwives Association, is based at the KNOV in Utrecht.
Safe Motherhood

Dutch midwives are actively involved in Safe Motherhood through their charity midwives4mothers (m4m). This organization helps to reduce maternal and infant mortality by empowering midwives in developing countries. Over the last years, they have built an intense collaboration with the midwifery association of Sierra Leone (SLMA) through their twin2twin project. 25 Dutch midwives were paired with 25 colleagues from Sierra Leone and exchanged knowledge and experiences. This successful project will be completed in 2012. Morocco will be the next country where m4m will initiate a twin2twin project, starting in 2013. Stay informed by Twitter and Facebook.

Do you have any question?
Please contact the KNOV at info@knov.nl

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Royal Dutch Organisation of Midwives