Tamba

TWINS & MULTIPLE BIRTHS ASSOCIATION

Maternity Services Survey Report September 2014

Forward

The Maternity Services Survey, conducted by Tamba, has been a unique opportunity to compare and contrast antenatal and postnatal services and support in several different countries. It highlights where excellent service delivery occurs and where there may be room for improvement.

It has long been known that there are more complications with multiple birth pregnancies compared with singleton pregnancies. This survey confirms that potential complications appear to occur at a similar rate across all countries surveyed, and occur more frequently than in singleton births. The babies are more likely to be premature, more likely to have lower birth weight, more likely to be admitted into a special care or intensive care neonatal unit and less likely to be breastfed.

Is enough being done to support the families who may face these difficulties during pregnancy and in the early months after birth? Who are the people best placed to offer the support? This report addresses these issues, and the answers will vary, depending on how the medical services are delivered in each country. It seems while the medical professionals have a major role to play in supporting families, the multiple birth groups in each country also offer valuable support to families.

There are some very positive results; in some areas there is excellent service delivery, however I believe this report will highlight the need for improvement in some areas. There is also an opportunity for multiple birth groups in each country to learn from what has been discovered here and to move their organisation forward, learning from their associates in other countries.

Monica Rankin

Chairperson

International Council of Multiple Birth Organisations

ICOMBO
INTERNATIONAL COUNCIL OF
Multiple Birth Organisations

Tamba is delighted to present the findings of this report which highlights the importance of parents, professional and multiple birth associations working together towards excellence in care and improved outcomes for multiple births. This report provides a unique oppurtunity for multiple birth associations and professionals to share best practice and, find ways to work together and plan strategies that will help achieve our common goal of improved outcomes for multiple births. Our thanks to all the families and groups across the world who took part and Dr Asma Khalil at St George's hospital London for reviewing the data. Now for the hard bit - implementing the findings!

Keith Reed

CEO

TAMBA - Twins and Multiple Birth Assocation

Tamba
TWINS & MULTIPLE BIRTHS ASSOCIATION

Tamba Maternity Services Survey
Report September 2014

Report Summary

Antenatal Care

The report found that across the six countries 78.5% of women are referred to a primary lead maternity carer, within one month of finding out they were pregnant with multiples However the time between referral and first specialist appointment was often taking 3-4 weeks. This is potentially a long time for families to be without speiclaist advice and support. It would be beneficial for the families if healthcare professionals signposted them to their multiple birth association at the time of referral to enable them to access educational materials and other useful resources.

Half of UK respondents were told about TAMBA by their midwife or consultant. Northern Ireland came out particuarly strongly in the survey with less than 30.3% having not been told about TAMBA by a health professional. In Northern Ireland TAMBA have established a named contact midwife/clinician at each hospital. It is TAMBA's goal to establish a named multiple pregnancies specialist contact at all UK hospitals.

Across all six countries the multiple birth associations provided good access to resources during pregnancy for multiple birth families. In the USA just 19.3% had been informed about their multiple birth association by their medical team. 34.4% of American parents had attended a parents of multiple meeting prior to the birth of their multiples.

30.2% of parents in Canada were informed of their multiple birth association by health professionals and 55.7% of parents in Canada attended a prenatal class for multiples.

In Australia 41.3% of parents made use of AMBA resources to prepare for the birth of their multiples. In the UK access to TAMBA resources is good with 63.8% of parents completing the survey using TAMBA resources. Attendance at classes was good with 19.2% attending TAMBA's Practical Preparing for Parenthood 2 hour seminar, in London this rose to 30.8% and 12.8% attending a day long antenatal class. Only 33.76% of parents in the UK were offered a multiple birth specific education session by their hospital. Hospital led parentcraft and prenatal sessions for parents rated less positively with only 9.1% rating these as very good and 16.5% as good.

There is an opportunity for multiple birth associations in all six countries to work more closely with health care providers to provide parent education for multiple parents. The education materials will better prepare parents for the early days with multiples enabling them to cope more successfully.

The USA led the way on general health advice with 87.5% of respondents having reported being given lifestyle and diet advice whereas only 61.8% of respondents in the UK reported receiving this advice.

New Zealand leads the way in mothers having access to a named specialist midwife with 35.7% respondents reporting they had access. Ireland has 24.7%, Australia 19.85% , UK 18.4% and USA 4.2% (care in USA is not generally midwife led) . The NICE guidelines in the UK state that there should be access to a named specialist multiple birth midwife for each multiple pregnancy so possibly either there are not enough named specialist midwives in post or they are not identifying themselves as such to the parents.

The NICE guidelines also state that for best practice the core team should include a named specialist obstetrician, midwife and sonographer. The report found only 27.89% of respondents saw a specialist sonographer with knowledge of multiple pregnancies. So as above communication between the hosptials and patients around the roles and responsibilites of key staff is vital to ensure that where there are named specialists in post this is known and acknowledged by patients and staff.

Gestation and Delivery

Currently the average delivery date given by the NHS is 37 weeks for twins and 33 weeks for triplets. This report found a clear shortening of gestation period to 35.7 weeks for twins, 32.5 weeks for triplets. Just 19.5% of all multiple pregnancies in this report were delivered at 38 weeks and just 4.5% being born after 39 weeks.

The report found that 48.3% of births were spontaneous, of which 66.6% resulted in a caesarean delivery. Of the 51.7% of births that were elective 75.3% were by caesarean.

This means 71.3% of all multiple births were by caesarean which differs from NHS statistics which say "almost half of all twins are born vaginally" This is a key learning and area for improvement in communication to expectant parents. If they are told there is a 50/50 chance of vaginal birth and in reality it is actually only 28.7% then there is potentially a significant amount of parents from whom expectations and outcomes differ significantly.

The report also highlights another area for improved communication around transfer to neonatal care with only 39.9% of parents giving positive responses on the advice given to them on admission to the neonatal unit. Although it can be noted that the UK had the lowest proportion of births that resulted in the need for specialist neonatal care with only 49.31% requiring neonatal care. Australia was highest with 65.38% requiring neonatal care.

Feeding

The report findings show that the UK rated well on advice given on feeding with 55.75% rating the advice positively, New Zealand leads the way with 74% and Australia 71.4% so we can clearly learn from their experiences.

Breastfeeding was the most popular feeding method in five of the six countries, used by 62.2% of mothers in New Zealand and 37.9% in the UK. Over two thirds of UK respondents said they were supported in some way with feeding and 64.4% of that support coming from health professionals such as midwives. 74.6% of parents reported haivng been taught and given help with expressing breast milk, which is particularly important for preterm babies. 53.6% of respondents reported being unable to breast feed due to early gestation.

Sleeping

Half of parents surveyed were given information on safe sleeping for multiples. 62.1% of multiples were co-bedded when they got home with co-bedding most common in Canada where 75.2% of multiples slept in the same cot or crib. In the UK just 6.1% of babies slept in a separate room from the parents, and 25% remaining in the same room as parents for 5-6 months which is in accordance with current recommended safe sleeping advice.

Tamba Maternity Services Survey Report September 2014

Full Report

This report describes the findings of the 'Maternity Services' survey distributed by TAMBA to parents of multiples in several countries. The survey was completed online between August 2013 and February 2014. In total 3728 responses were collected. The survey asked parents of multiples for details regarding the birth location, information and support given to them ante and post natal, and input received from their country's multiple birth association.

Background Information

The survey was completed predominantly by mothers of twins (92.8%). Mothers of triplets also responded (5.7%), as did a very small number of fathers (1.2%). In the main these were parents whose multiples had been born within the last six years (94%). A quarter (25.1%) had given birth within the last two years and over a third (37.1%) within the last year. Almost half the respondents (43.4%) were from the UK. Roughly a tenth were living in Ireland (10.7%), USA (11.6%) and Canada (10%). A further 15.2% lived in Australia, 8.5% in New Zealand and the remainder (0.6%) from other countries including France, the Netherlands and South Africa.

Gestation and Birth

The distribution of gestation time (in weeks) for twins, triplets and quads are shown in the charts below. Frequency increases up to 38 weeks as the peak, 19.5% of all multiples were born then. There is a huge drop in frequency beyond that point, with only 4.5% of multiples being born after 39 weeks. Very few pregnancies were allowed to go to 40 weeks (1.2% of all pregnancies) and only 8 births occurred after 41 weeks.

According to the NHS (www.nhs.uk/Conditions/pregnancy-and-baby/pages/premature-early-labour.aspx and www.nhs.uk/conditions/pregnancy-and-baby/pages/giving-birth-to-twins.aspx) of all pregnancies, “about one baby in every 13 will be born prematurely - in other words, before the 37th week of pregnancy.” In this study, 52.9% of all births took place before the 37th week of pregnancy (24-36 weeks). This figure, much higher than the 1 in 13 (or 7.7%) given above confirms the NHS's statements that “many twins and triplets are born prematurely” and that “fewer than half of all twin pregnancies last beyond 37 weeks”.

The average delivery date given by the NHS for twins is 37 weeks and 33 weeks for triplets. The average delivery dates reported in this survey were 35.7 weeks for twins, 32.5 weeks for triplets and 30.5 weeks for quads. These dates are slightly lower than the NHS averages, and show a clear shortening of the average gestation period as the number of multiples increases. The above chart shows this variation in gestation time. Each order of multiples has a different point at which frequency peaks. For twins this is at 38 weeks (21.5% of twins pregnancies), for triplets the frequency peaks at 33 and 34 weeks (each 17.7% of triplets pregnancies) and for quads the peak occurs at both 31 and 34 weeks (each 16.7% of quads pregnancies.

The nature of births was almost equal to a

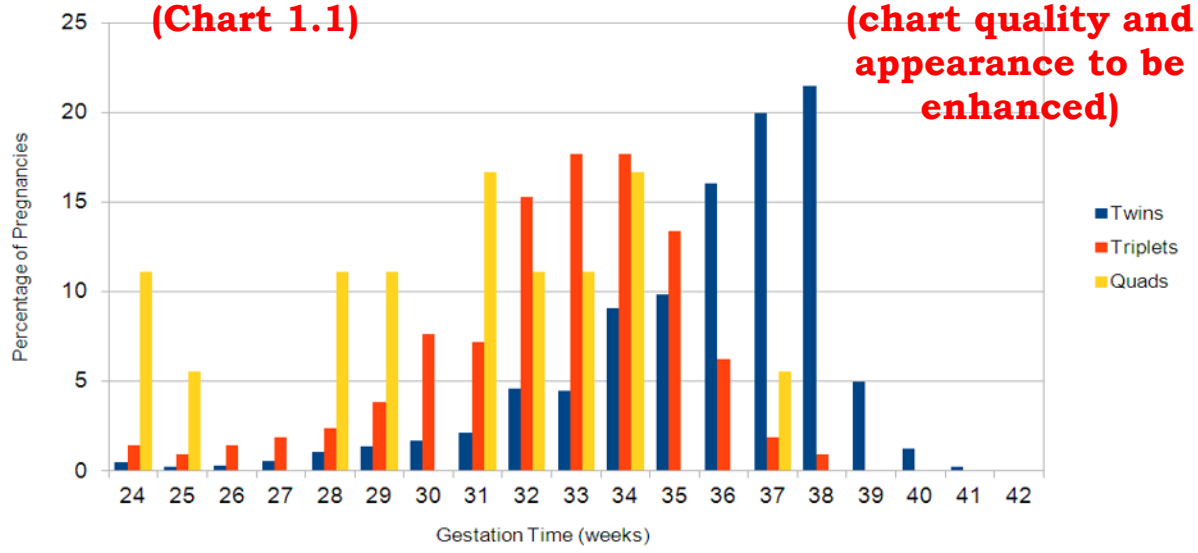
50/50 split between elective (51.7%) and spontaneous (48.3%), this means that just over half of the surveyed pregnancies ended on a pre-planned date and were either delivered through Caeserean section or were induced Three quarters (75.3%) of the elective (booked in) births were by Caesarean section. This proportion was less for spontaneous births, as 66.6% were Caesarean , and the remaining third (36.7%) vaginal births. Overall, survey data regarding birth type differs from NHS statistics that "almost half of all twins are born vaginally". This survey reported 71.3% of all births were by Caesarean section, and 31.5% vaginal.

Chart 1.2 below shows that for twins, both babies are generally above 1.5kg at birth. The second twin tends to be smaller, and is more likely to be between 1.5 and 2.5kg, whereas the first twin is slightly more likely to be over 2.5kg. In the case of triplets, the third baby is very unlikely to be over 2.5kg. Most third babies were between 1.5 and 2.5kg, with approximately a third being under 1.5kg.

Gestation and Birth

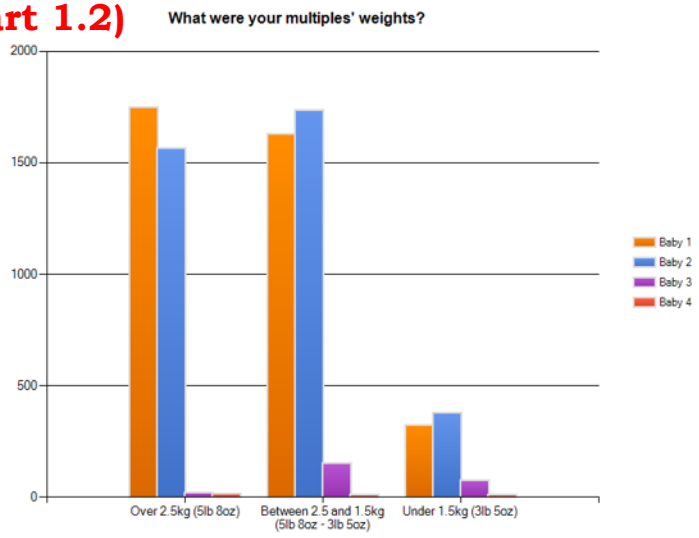
(Chart 1.1)

(chart quality and appearance to be enhanced)



(Chart 1.2)

(chart quality and appearance to be enhanced)



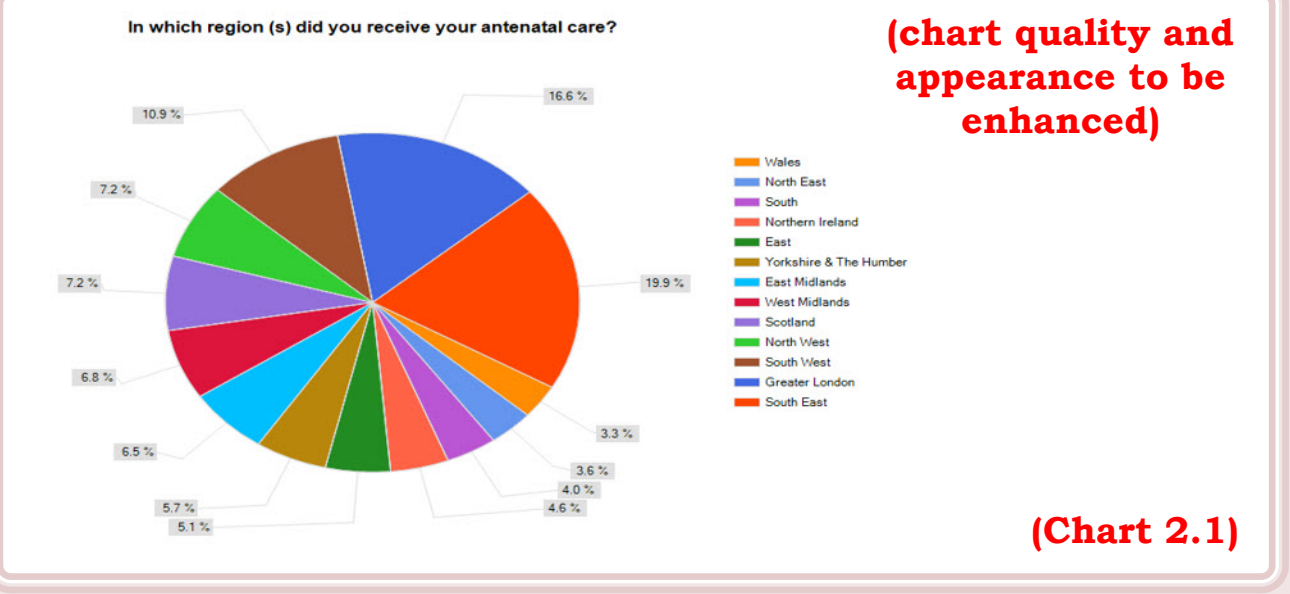
Maternity Services - Giving Birth

The main focus of this TAMBA project is on maternity services, including the care and advice given to parents. Obviously this may not be the same across, or even within countries. UK respondents represented all areas of the UK, as outlined in Chart 2.1. Respondents were not evenly distributed across the UK, as the South East and Greater London in particular were disproportionately well represented. This may well be due simply to general population density.

Certain hospitals were found to have a high proportion of respondents that gave birth and received care there. In total 31 hospitals out of the 317 listed were attended by 1% or greater of respondents. Thirteen of these hospitals are regional centres, to which mothers of multiples are likely to be referred. Most of the remaining 'popular' hospitals have strong relations with TAMBA and refer all their families to the association.

Respondents from other countries also showed an uneven distribution. This is likely to be a reflection of population demographics in each state. It may also indicate the level of activity and awareness of the relevant Multiple Births Association in each state. In the USA for example, the National Organisation of Mothers of Twins Clubs (NOMOTC) may have greater impact in Texas, Florida, California and Massachusetts, than in Hawaii, Alaska, Arkansas and Vermont, and so parents having twins or triplets in the former states are more likely to be told about the NOMOTC or receive advice, training or support from them and subsequently be completing a survey sent by them.

In Canada there is a marked difference in distribution. Almost half the respondents (49.4%) were from Ontario, 19.4% from Alberta. Five of the provinces/territories had no respondents. This is, in part, a reflection of the population levels of the provinces, as Ontario was home to 38.5% of the total population, Alberta 11.4%. A lower than expected number of births took place in Quebec, as this province hosted 23.2% of the Canadian population (www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo02d-eng.htm). Almost all the respondents (97.2%) gave birth within their home province. Over two thirds of Canadian respondents were able to give birth in a hospital close to their home as 69.4% travelled up to 25km to the hospital. Most of the remaining respondents were



(chart quality and appearance to be enhanced)

(Chart 2.1)

fairly close to the hospital, 13.4% travelled between 25 and 50 kilometres, 9.5% travelled 50-100km. The nature of some Canadian provinces becomes evident through the fact that three respondents had to travel more than 500km to give birth.

Australia also showed uneven distribution. There were three main territories heavily represented (New South Wales 29.4%, Queensland 25.7% and Victoria 23.1%). Three territories had between 5 and 9% of respondents and the last two less than 1%.

Similarly to Canada, over two thirds of Australian respondents were able to give birth in a hospital less than 25km away from their home (69.4%). Almost a fifth (18.2%) had to travel between 25 and 50km, and 5% up to 100km. Again, some mothers had to travel more than 500km to give birth. In Australia this was 1.1% of respondents.

Maternity Services - Antenatal Care

Australian respondents were also asked who provided their antenatal care. More than half (53.8%) were cared for by a private obstetrician. Almost a quarter (24.5%) had their care provided by a hospital obstetric team, in a general pregnancy clinic. Fewer respondents received care from a hospital obstetric team in a multiple birth pregnancy clinic. A tenth (10.8%) received shared care, 5.9% were given care by a midwife only and 2.7% by a GP only.

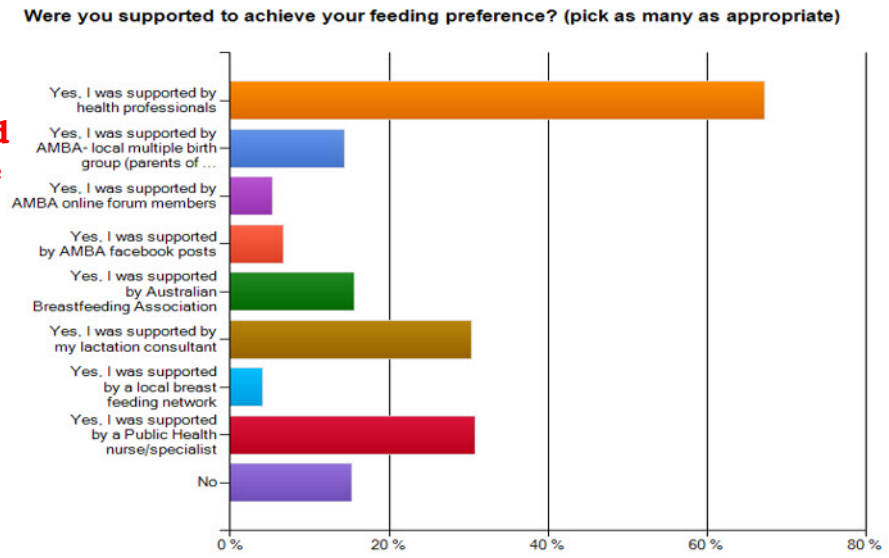
Almost half (47%) of the Australian respondents reported that they had attended an Australian Multiple Births Association (AMBA), or a local twin club, parents education or antenatal session. A similar proportion of respondents were members of the Australian Multiple Births Association (51.7%) and/or a local multiple birth club (45.2%). Some respondents had previously been members of these associations (12.3%) but had now lapsed. Only a fifth (20.5%) had never been a member of either association. This is likely to be due the method of circulating the survey in Australia, as this was carried out through AMBA clubs and their Facebook page.

Parents of multiples in Australia were asked about the support they received with regard to their feeding preferences for their babies. Chart 3.1 shows the ways these parent received this support. Two thirds (67.2%) of parents completing the survey had been supported by health professionals. Almost a third had been supported by a specific health professional, as 30.4% reported the support of their lactation consultant, and 30.8% a Public Health nurse or specialist. The AMBA were also significant in providing support for parents over their feeding preferences. This took several forms; local groups, online forums and Facebook. The Australian Breastfeeding Association also reported to be a provider of support, as were local breastfeeding networks. Only 15.3% of parents of multiples in Australia felt that they were not supported in their feeding preferences.

In line with other countries involved in the survey, an uneven geographical distribution of multiples births was also revealed in New Zealand. Four of the twenty District Health Boards had each been the site of more than ten percent of multiple births. These were Canterbury (11.6%), Capitol and Coast (16.4%), Auckland (15.4%) and Bay of Plenty (12.7%). These statistics cannot be entirely explained by population figures alone. The first three of these DHBs are in the top six for population size for the age groups most likely to have children (15-44 years) according to data from the New Zealand

(Chart 3.1)

(chart quality and appearance to be enhanced)



Ministry of Health (2006, www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets/maori-health-data-and-stats/tatau-kahukura-maori-health-chart-book/tatauranga-taupori-demographics/population-dhb-all-ages). However, the Bay of Plenty is only the 8th largest district, according to the above data, and Waitemata, the largest district in terms of population aged 15-44, was the location of birth for only 7.5% of the respondents from New Zealand.

Respondents from New Zealand were asked what information their midwife or Lead Maternity Carer (LMC) gave them about the system of care for multiple pregnancy, the process for referral of care and why that was recommended. Only 3.5% of respondents had not received any information. More than half the parents had received good quality information, in that their LMC explained in full how care for multiples was different, the options for care, and the referral process. However, almost a quarter (24.0%) were given some information but had to seek further information and explanation, and 13.2% reported being given little information and had to seek this out for themselves.

For the parents of multiples in New Zealand, antenatal care was most commonly provided by both the hospital obstetric team and the community midwife (52.2%). A quarter received care from the Hospital Obstetric Team only (24.7%) and 22.7% from a private obstetrician. Some respondents (13.7%) were given antenatal care by the community midwife only, and far fewer by the GP only (7.2%) or a maternal fetal medicine specialist (6.2%).

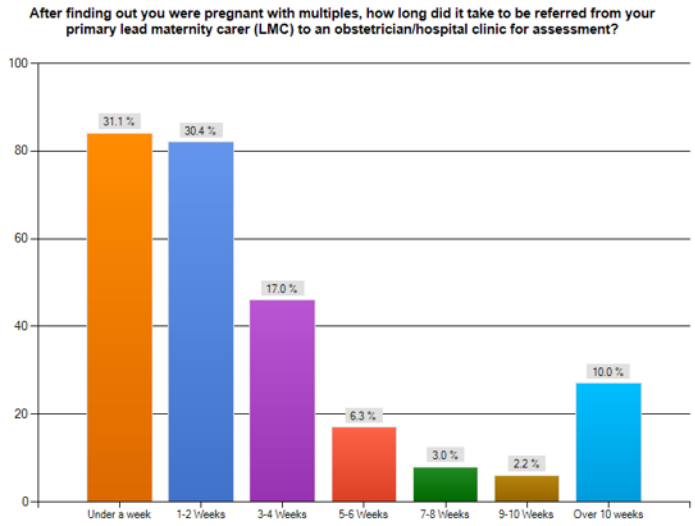
Data was collected concerning the length of time it took from finding out that it was a multiple pregnancy to being referred from the primary lead maternity carer (LMC) to an obstetrician/hospital clinic for assessment. Chart 3.2 shows that for the vast majority of parents this happened quickly, as 78.5% were referred within a month.

The length of time that elapsed between referral for assessment and the first specialist appointment was also generally under a month, but as can be seen in Chart 3.3, was not quite as immediate, most often taking 3-4 weeks (37.4%).

Parents of multiples located in Ireland were asked specific questions regarding antenatal care. Again this revealed a heavily weighted geographical distribution of the location of antenatal care. Over half the respondents (55.9%) received their care in Dublin. In terms of population distribution, only 28.2% of all females living in Ireland are located in Dublin (2011, Central Statistics Office www.cso.ie/en/statistics/population/populationofeachprovincecountyandcity2011). However there is likely to be a greater proportion of the fertile (of childbearing age) female population living in Dublin. County Galway was the second most

(Chart 3.2)

(chart quality and appearance to be enhanced)

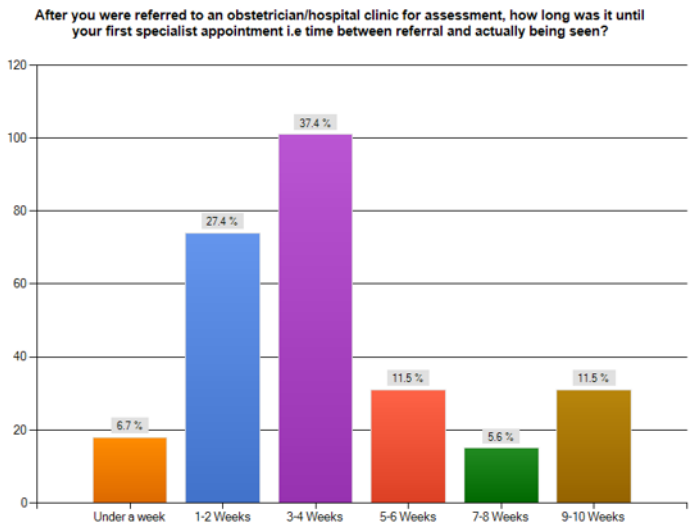


popular for receiving antenatal care (14.95%), yet houses only 5.4% of the female population. Cork was in third place, the location of 12.6% of reported care. The county was, at the last census, home to 11.3% of the females in Ireland.

From the county data is to be expected that hospitals located in Dublin, Galway and Cork have the highest percentage of births and care provision. From the female population statistics it may be concluded that these counties have higher than expected numbers of births and antenatal care. This may be due to referrals, in that parents expecting a multiple birth may well travel outside of their home county to receive the best care. The nature of the five hospitals that saw the vast majority of the respondents' births indicates that this may be true. The Coombe Women's and Infants Hospital in Dublin oversaw 13.5% of the births in the survey population. It has a 'multiple birth clinic' as part of its Specialist Maternity Services (www.coombe.ie/index.php?nodeId=64). The Rotunda Hospital in Dublin also has a specialist clinic for 'multiple pregnancy'. It hosted 17.4% of respondents' births. The National Maternity Hospital in Dublin claims that 1 in 12 Irish citizens are born there (8.3% of births). More than double the ratio (22.96% or almost 1 in 4) of Irish twins or triplets are born there, possibly as a consequence of the fact that it is the

(Chart 3.3)

(chart quality and appearance to be enhanced)



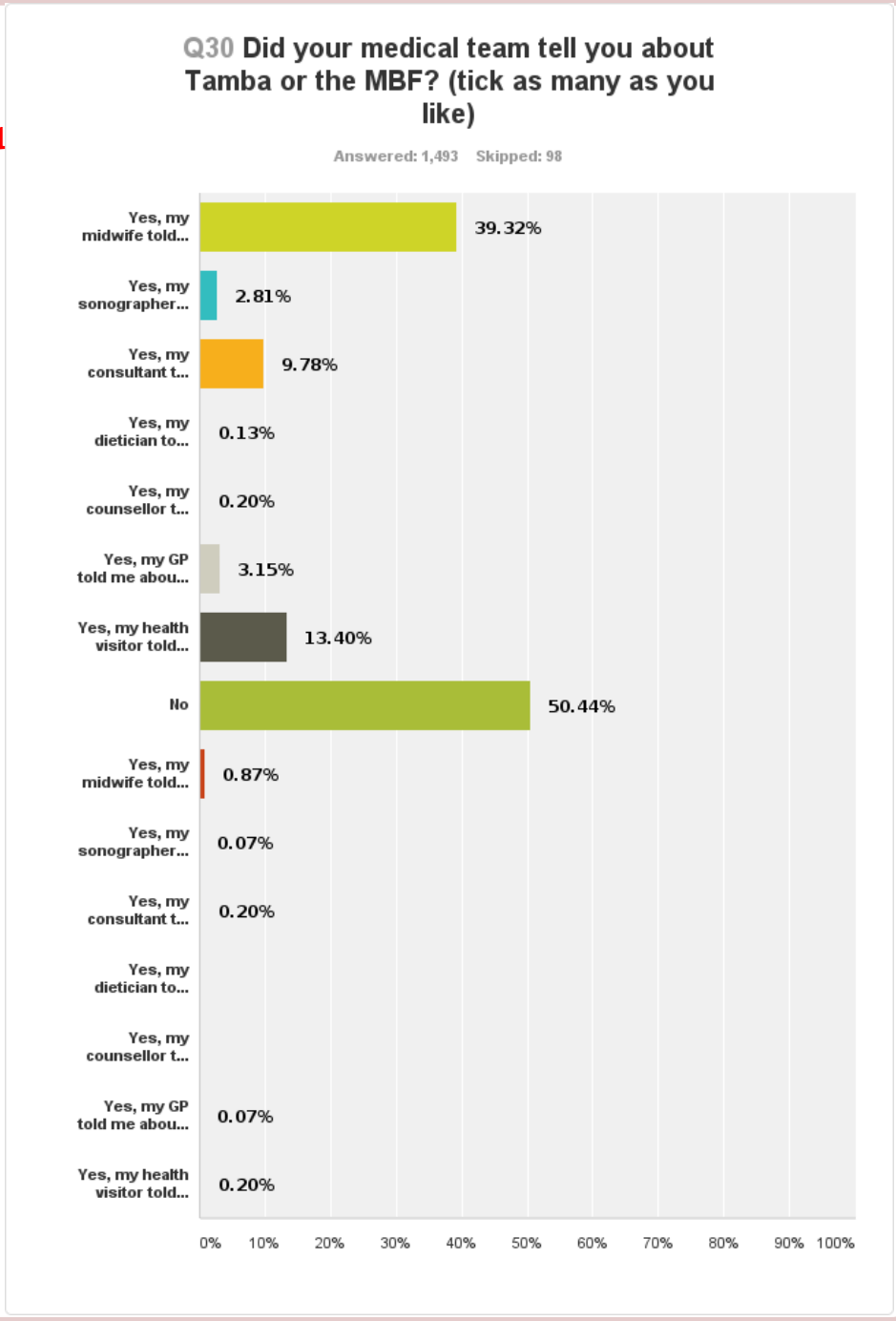
national referral centre for complicated pregnancies (www.nmh.ie/about-us.8.html). Cork and Galway had only one maternity hospital each with a high percentage of respondents utilising its services, (Cork University Maternity Hospital, 12.1% and University Hospital Galway, 12.9%) and these corresponded roughly to the county percentages from the previous question, implying there was only one choice of hospital available for parents in those counties.

TAMBA and the MBF

Survey respondents from the UK and Northern Ireland were asked if their medical team had told them about TAMBA or the Multiple Births Foundation (MBF).

(Chart 4.1)

(chart quality and appearance to be enhanced)



Half of the UK respondents had been told about TAMBA by a member of their medical team, in most cases this was their midwife (39.3%). Health visitors and consultants were also shown to be active in informing parents about TAMBA (13.4% and 9.8%). The situation regarding MBF was very different, as only around one percent of parents surveyed in the UK were informed of the MBF by any member of their medical team. The MBF has only one location for its prenatal classes, and this is in central London. Those survey respondents living in Greater London were three times more likely to have been told about the MBF, but this was still only 2.95% of these parents being informed by their midwife, and 0.42% by their health visitor.

Unsurprisingly, considering its London location, none of the respondents from Northern Ireland had been informed about the MBF. An even greater proportion of respondents in Northern Ireland than the UK are informed about Tamba. This is important, and likely to be due to the fact that "Tamba is the only organisation in Northern Ireland which is dedicated to providing information and mutual support networks to families with twins, triplets or more" (Tamba, 2014 www.tamba.org.uk/NI). More than half the respondents were told about Tamba by their midwife (56.1%). A fifth were informed by their consultant (21.2%) or their health visitor (21.2%). Less than a third of respondents from Northern Ireland (30.3%) had not been informed about Tamba by any of their medical team. At least 40% of respondents using each of the eight hospitals in Northern Ireland providing birth and antenatal care had been told by a member of their medical team about Tamba. Knowledge of Tamba therefore seems to be across the area, and not confined to one hospital. This may well be because Tamba itself is not confined to one small area in Northern Ireland, but runs classes in at least six locations across the country.

In England over half of those completing the survey had been told about Tamba. Not all of these parents went on to attend any of Tamba's parent education sessions, (69.3% of all the parents residing in England). The most popular session was Tamba's two hour 'practical preparing for parenthood' class (19.2%), followed by their day long antenatal class (12.8%). Relatively few parents had attended more than one breastfeeding class (1.98%) or a Tamba hospital talk (1.3%). Even less of the respondents had attended an MBF hospital talk (0.76%). Attendance of Tamba sessions was higher than average in Greater London. Here a quarter (24.9%) of parents had been to a day long antenatal class, and even more (30.8%) had attended the preparing for parenthood class. Less than half of the respondents from Greater London had not attended any Tamba session (47.4%). Despite its central London location, only 1.6% of respondents living nearby had attended an MBF hospital talk. Higher attendance in Greater London may be down to provision, as Tamba run sessions at four venues in Greater London. However, Tamba also offer several venues (up to ten) in the South East, yet respondents from this area reported lower than average attendance at Tamba sessions, as 72.4% had not attended any session.

In comparison with England, attendance of Tamba session was much lower in Scotland and Wales (91.9% and 80.4% had not attended any session, respectively). This may due to the limited provision of courses in Wales, as only one venue is offered (Cardiff), however, at least eight venues across the country are shown in the website course listings for Scotland. Northern Ireland, like Scotland has its own dedicated website, and hosts sessions in six locations. Take up of education sessions in Northern Ireland is comparable to England. It has the highest proportion of attendance (only 54.2% of respondents had not attended any session) with almost a fifth (19.4%) attending the preparing for parenthood class.

Tamba, in addition to running parent education sessions, also produces resources (reading materials, DVDs and web content) to help prepare parents for

the birth of their multiples. These were used by a greater proportion of survey respondents than those attending sessions. In England 63.8% of parents completing the survey had used some Tamba resources. The same proportion occurred in Scotland (63.6%), and remained over half in Wales (54.9%). The highest proportion of parents using Tamba resources occurred for those living in Northern Ireland. Again, this may be due to the greater percentage of parents being informed about Tamba by their medical team in Northern Ireland, or Tamba's reputation and position in Ireland as the only source of support for parents of multiples. Whilst the rest of the UK does have other organisations, the use of their resources was shown to be extremely limited, as only 0.3% of respondents in the rest of the UK reported using any materials produced by the MBF.

National Multiple Births Associations

The survey asked respondents from other nations about their own national organisations. In the United States the National Organization of Mothers of Twins Clubs (NOMOTC) is also known as Multiples of America. Few of the respondents from America had been informed about their organisation by their medical team (19.3%). Most of those (14.7%) who had been informed had been told about NOMOTC or local parents of multiples clubs by their doctor. A third of American respondents (34.4%) had attended a local 'parents of multiples' meeting prior to the birth of their multiples. Those that did not explained that in most cases they did not know about local clubs or meetings at that time, or that they were unable to attend those meetings, frequently due to required bed rest, and sometimes due to already having children to care for. Similar numbers of parents reported using NOMOTC produced resources as attended meetings (32%). The NOTOMC website was used by more parents for preparation for birth (24.5%) than printed materials (14.3%).

A greater proportion of respondents in Canada had been informed about their local organisation, Multiple Births Canada, by their medical team, but this was still less than a third (30.2%). Information was most often provided by the respondent's nurse or RPN (14.5%), their public health/region family visitor (10.6%) or their GP/family doctor (9.1%). Where it was offered, take up of MBC's multiple birth preparatory classes was fairly high. Over half (55.7%) attended a prenatal class for multiples pregnancy, 43.6% went to an 'Expectant Parents of Multiples' information session and 21.8% attended monthly playgroups with new parents of multiples. Again a greater proportion of respondents in Canada than the US had used their organisation's resources to prepare them. Nearly half (42.9%) of Canadian respondents had used MBC multiples specific reading materials, fact sheets, booklets or websites prior to the birth of their multiples. In comparison, the rate at which parents in Canada had joined a Multiple Births Canada support network was very low. Only 19% had joined a network. This was most commonly a breastfeeding support network (9.2%) and also a higher order multiples network (3.6%) and a preterm multiples support network (3.6%).

Parents living in Australia who responded to the survey indicated that more of them had been informed of their local association by their medical team than respondents in the USA and Canada. In

Australia, 37.7% of parents of multiples had been told about the Australian Multiple Births Association by a member of their medical team, most often their midwife (24.3%). Use of AMBA materials was not as widespread as the use of TAMBA materials in the UK, but similar to Canada, with 41.3% of parents making use of AMBA reading materials, videos and web content to prepare for the birth of their multiples.

A similar proportion of respondents living in Ireland (39.4%) had been informed about the IMBA by a member of their medical team. Again, this was most frequently done by the midwife (25.6%). Almost a tenth (9.6%) had been told about IMBA by their sonographer. Three in ten of the Irish parents completing the survey had attended an IMBA antenatal parent education session (30.2%). A greater percentage (41.8%) had made use of IMBA produced resources.

The highest rate of parents of multiples being informed of their local association by their medical team occurred in New Zealand. There 61.9% of parents were told about the New Zealand Multiple Births Association by a member of their team. Half of all parents (50.5%) were told about the NZMBA by their midwife. Consultants were responsible for informing 11.7% of parents, and 7.5% of GPs. Use of local association resources was relatively high in New Zealand as 55.3% of parents there reported using NZMBA produced reading materials, videos, DVDs and web content.

Maternity Care

Chart 5.1 shows the percentage of parents in the countries involved in the survey that were offered an ultrasound scan by fourteen weeks.

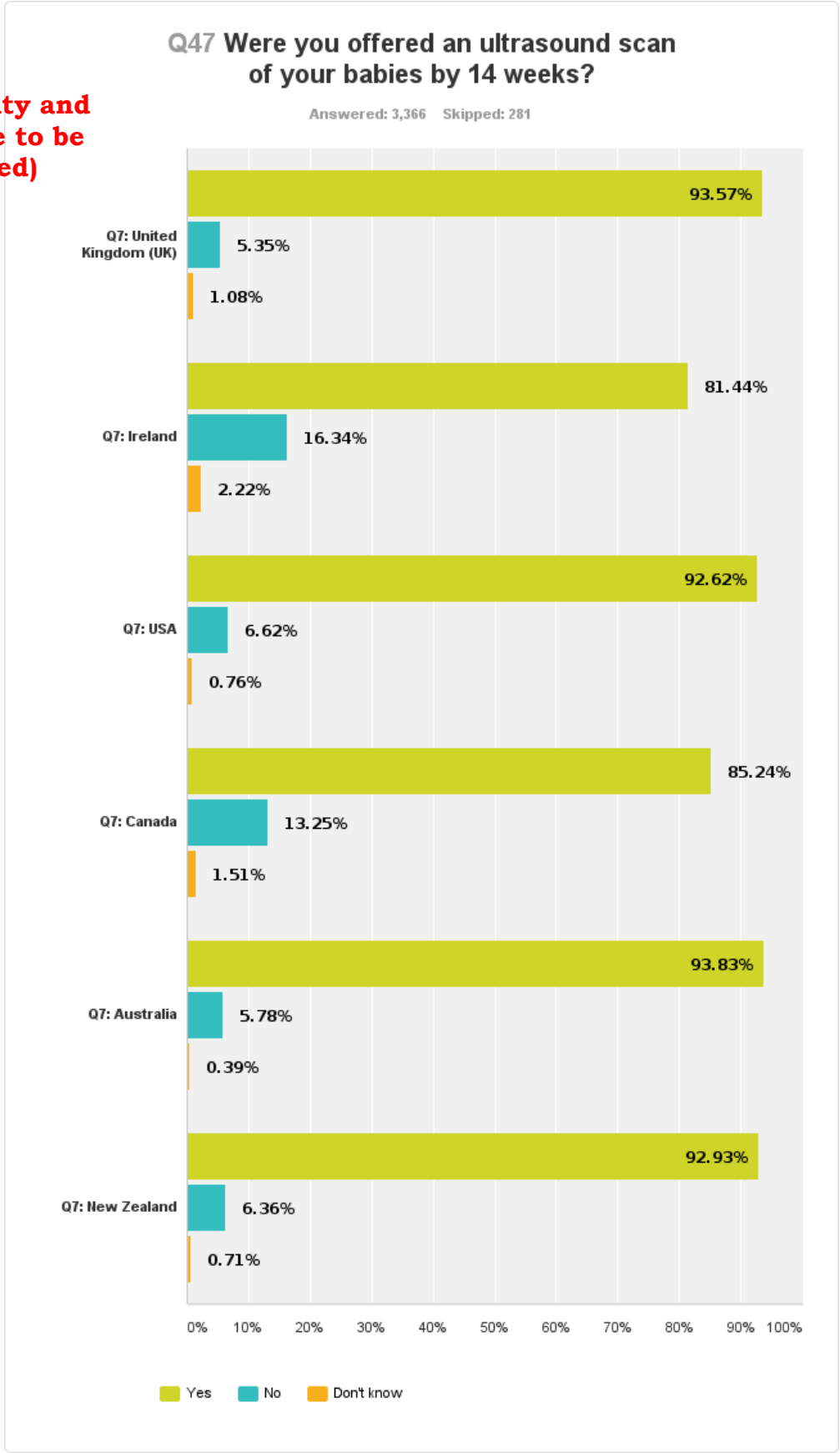
The percentages that were offered this ultrasound were very similar in four of the countries, with around 93% of parents in the UK, New Zealand, Australia and the USA being offered this by 14 weeks into the pregnancy. The percentage is slightly lower in Ireland and Canada.

The survey asked parents in all the six included nations how many ultrasound scans they had been given during the course of their pregnancy. The results for each country followed a similar pattern, showing an approximate normal distribution curve, peaking at either six (UK - 16% and Canada - 13.6%) or ten scans (Ireland - 23%, USA - 14.9%, Australia - 16.7% and New Zealand - 14.9%). Chart 5.2 shows the UK data as an example illustration.

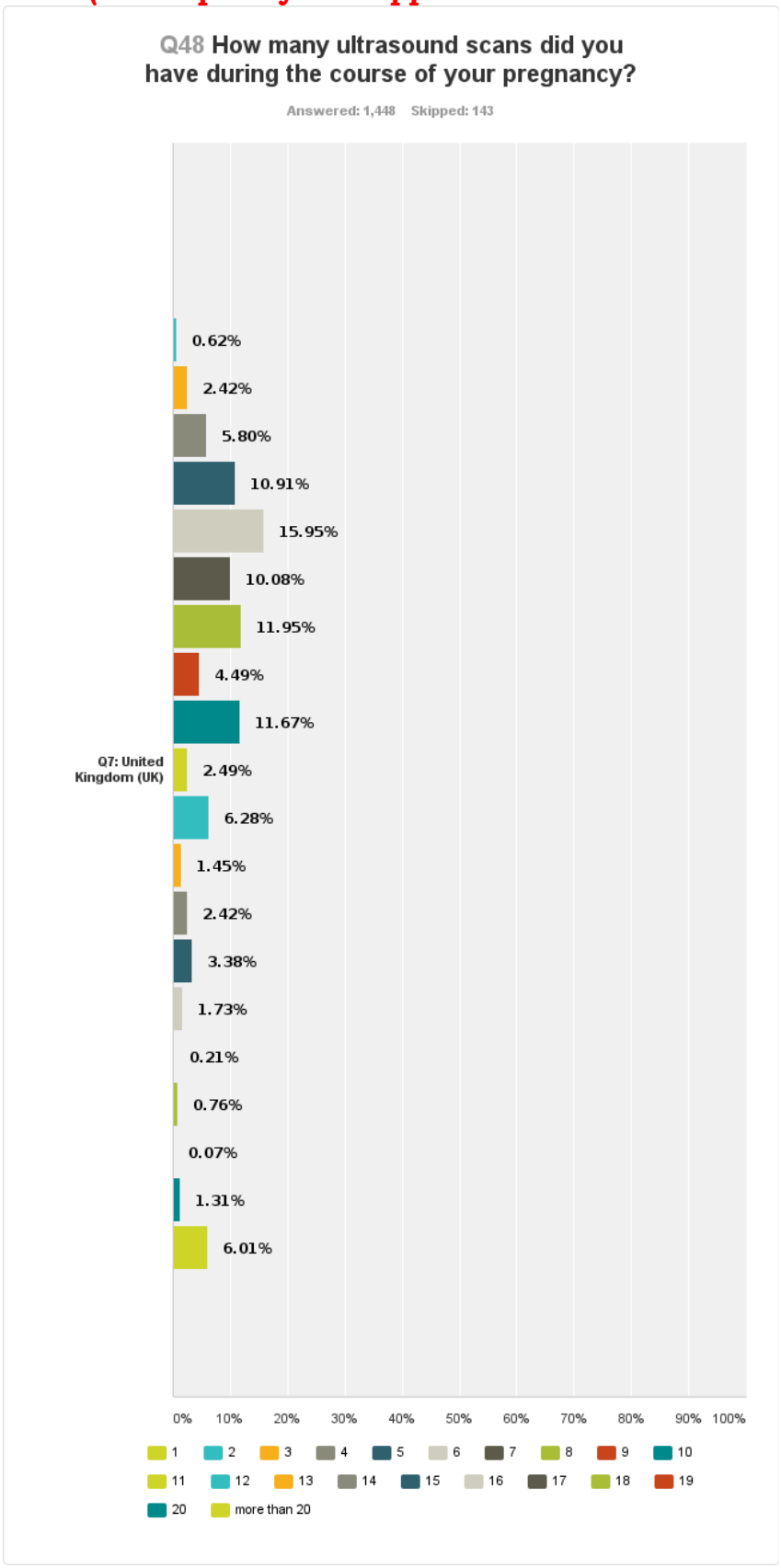
Of note is the data for 20 or more scans. Each nation's graph showed a sharp rise in frequency for this category and in the USA this was actually the most commonly selected category (26.7%). In the UK "Hospitals routinely offer women at least two ultrasound scans during their pregnancy" (National Health Service, 2014 www.nhs.uk/conditions/pregnancy-and-baby/pages/ultrasound-anomaly-baby-scans-pregnant.aspx#close). The first, the 'dating scan', is usually at around 12 weeks into the pregnancy and the second 'anomaly' scan is usually between 18 and 21 weeks (NHS, 2014). Only four of the 3287 respondents had received only one scan, and a further 28 only the standard two. Instead, at least six scans could be seen as the standard for pregnancies of multiples, with more being by no means unusual, particularly in the case of complicated pregnancies, or a relatively late delivery. Having at least twenty scans indicates that the pregnancy is being monitored at least once every two weeks. In the case of multiple pregnancies this seems to be deemed necessary in a large number of cases, particularly in the USA, where a quarter of mothers (26.7%) had more than twenty scans. Maternity care being in the private or public sector may have been a factor in influencing the number of scans carried out.

(Chart 5.1)

(chart quality and appearance to be enhanced)



(Chart 5.2) **(chart quality and appearance to be enhanced)**



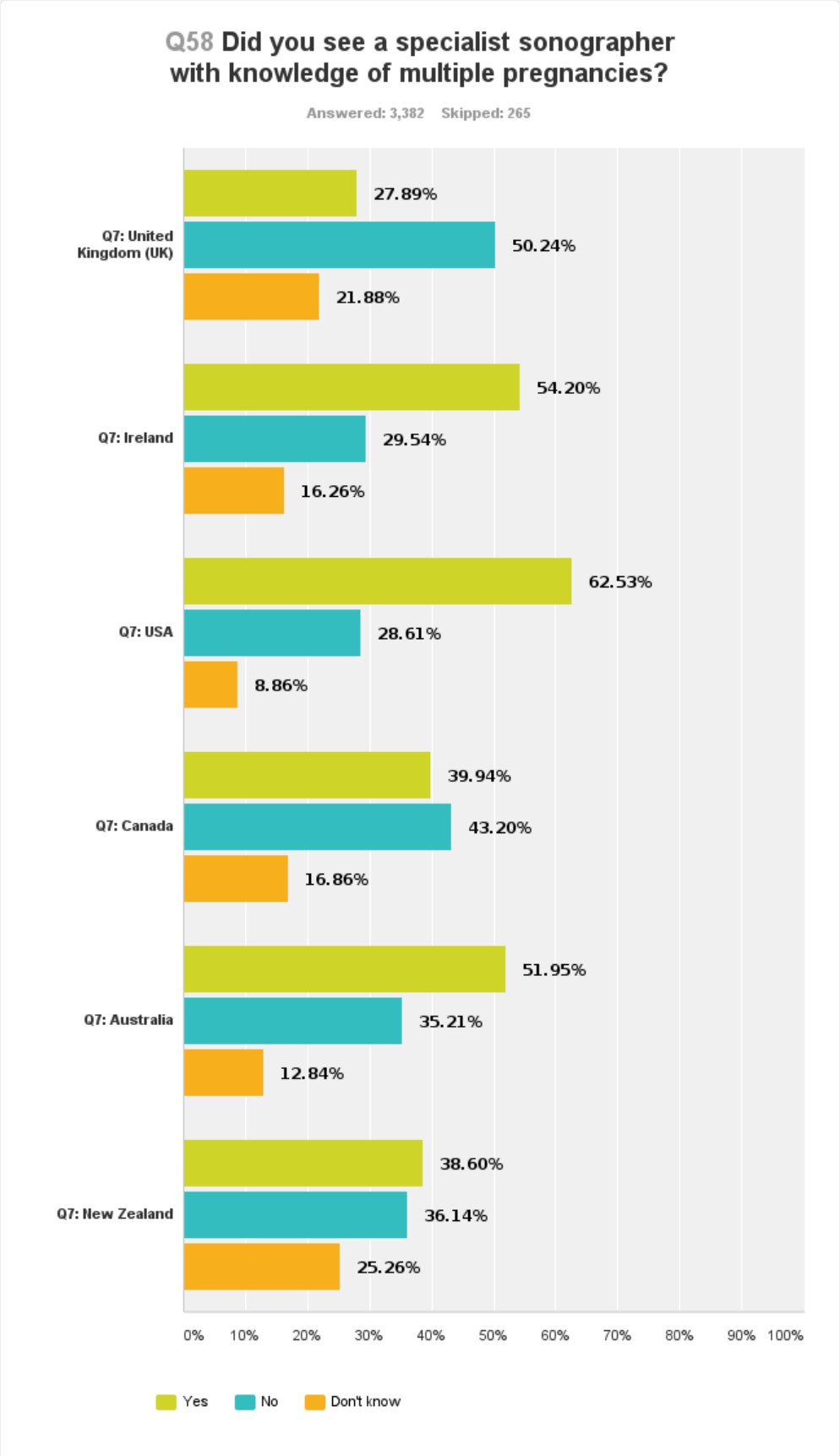
Another purpose of the ultrasound scan is to determine the chorionicity of the babies. In the vast majority of cases this was done in the first scan. The highest frequency for this occurrence was in the UK, where chorionicity was determined at this point in 86% of cases. The lowest was the USA, where this happened at the first scan in 67.7% of pregnancies. Overall a Dichorionic twin pregnancy occurred in almost three quarters of the reported cases. The lowest frequency (69.8%) of dichorionic twins was reported in Canada, and the highest (76.2%) in Ireland. The majority of all parents asked reported that the chorionicity of their babies had been explained to them. Again, data were similar across the six nations, ranging from 66% responding positively in the USA, to 81.3% saying that, this was explained in the UK. The first major difference between the different countries included in the survey was in the response to the question 'were you offered a screening test for Down's Syndrome?' The frequency for positive responses ranged from 85% in the UK, to 92% in Australia. However, in Ireland only 16.9% had been offered this test. The policy in Ireland differs from that in the UK. In the UK 'screening for Down's syndrome and other genetic disorders is offered to all pregnant women' (NHS, 2014 www.nhs.uk/conditions/pregnancy-and-baby/pages/screening-amniocentesis-downs-syndrome.aspx), although clearly in practice, not everyone is offered this test as 13.3% of UK respondents said they were not offered it. The same pattern continued with the responses to the follow up question regarding Down's Syndrome. All countries except Ireland had similar numbers of parents reporting that, if they had received a high risk result for Down's Syndrome, then the options and implications of proceeding to a diagnostic test were discussed with them (from 51.1% in Canada to 58.8% in the UK). In Ireland only 18.6% of parents at high risk had received that advice. Abortion is illegal in Ireland and so screening for Down's Syndrome is not routinely offered, therefore parents in Ireland may be unaware of possible health issues with their babies until birth.

The USA led the way in terms of more general health advice. Most (87.5%) of the respondents from the US reported having been given advice about diet, lifestyle and nutritional supplements. This advice was received least often in the UK, as only 61.8% of parents reported being given this health advice. Three quarters of mothers received full blood counts (to detect anaemia and other blood problems) at 20-24 and 28 weeks in the UK (75.9%), Ireland (75%) and the USA (74.4%). Tests were slightly more common in New Zealand (80.6%), but less so in Australia (67.9%) and Canada (56.5%).

Broadly similar proportions of parents in each country had seen a specialist obstetrician with knowledge of multiple pregnancies (67.4% in Australia to 79% in New Zealand). For the parents to see a specialist midwife with knowledge of multiple pregnancies was far less common. This hardly ever happened in the USA (4.2%) and Canada (2.5%). Almost a fifth of parents in Australia (19.8%) and the UK (18.4%) and a quarter in Ireland (24.7%) got to see a specialist midwife. Whilst in New Zealand 35.7% of parents had that opportunity. A greater amount of variation was seen in the frequency at which respondents had seen a specialist sonographer with knowledge of multiple pregnancies. Over a quarter (27.9%) of respondents in the UK had seen a specialist sonographer, but almost as many did not know if they had seen a multiples specialist (21.9%). As can be seen in Chart 5.3, the UK had the fewest reported incidences of seeing a specialist sonographer. Over half (62.5%) of respondents in the US had this service.

Again the UK were at the bottom of the range, and the USA at the top for the percentages of parents having had any discussion with their medical team regarding the risks, symptoms and signs of preterm labour and the potential need for steroids for fetal lung maturation in a multiple birth. In the UK 60.5% of respondents had discussed this, other countries reported slightly more frequent discussion, the most occurring in the USA (80.5%). Nearly all of the respondents in all of the countries reported having a

(Chart 5.3) **(chart quality and appearance to be enhanced)**

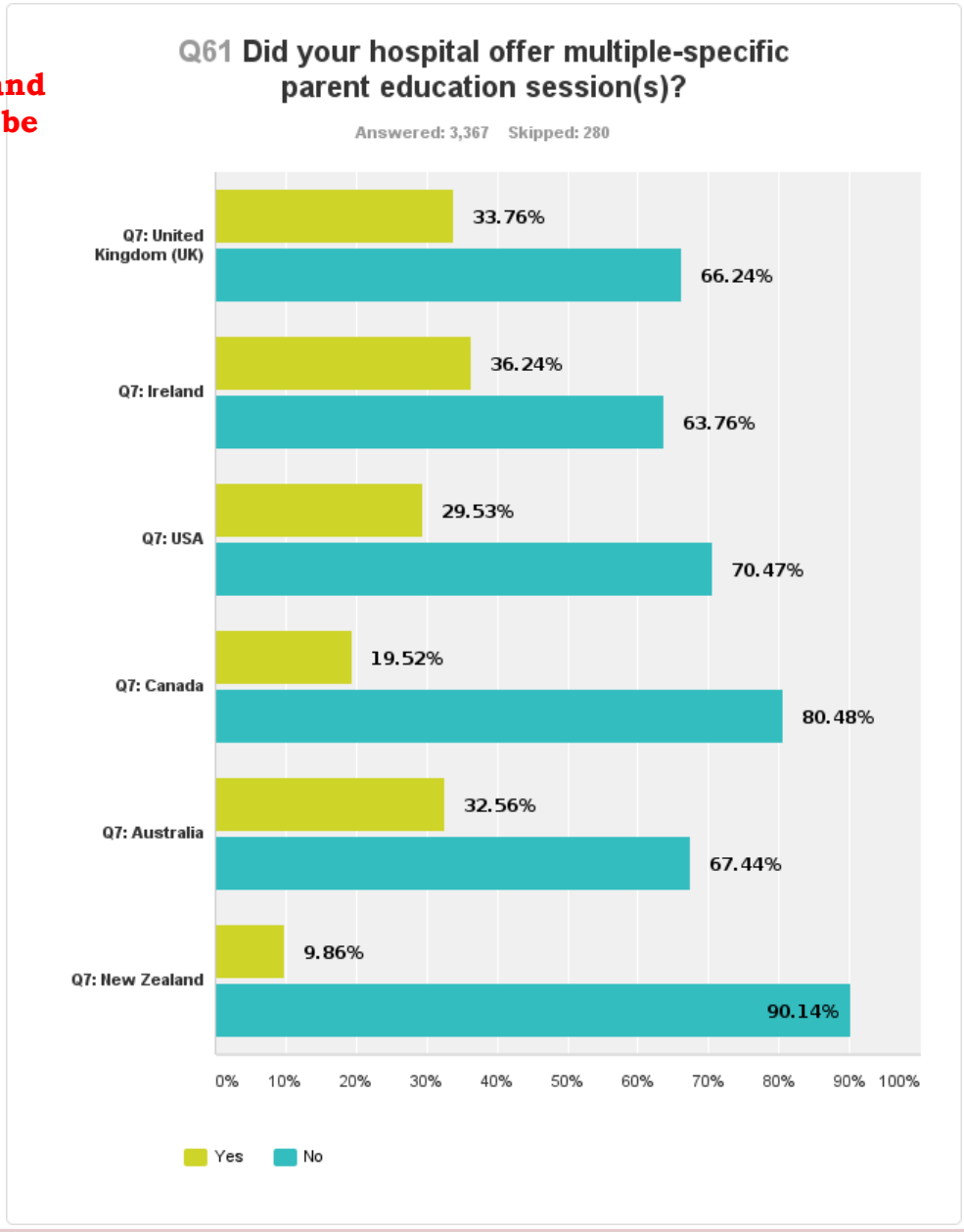


discussion with their medical team about the likelihood of having a Caesarean section or vaginal delivery (86.7% in Ireland and up to 94.9% in the USA).

A degree of variation existed between the six countries involved in the survey as to the provision of parent education. Less than a tenth (9.9%) of parents in New Zealand were offered a multiple specific parent education session by their hospital. A third of parents in the UK had this provision (33.8%), a little less than in Ireland (36.2%). These figures can be seen in Chart 5.4 below and are likely to be affected by the size of the hospital attended, as only larger hospitals, as opposed to smaller suburban hospitals can offer multiple specific parent education sessions.

(Chart 5.4)

(chart quality and appearance to be enhanced)



The following tables show the opinions of parents from the UK regarding the advice given to them by members of their clinical team. Parents were generally happy with the advice they were given relating to preparation for delivery, from the doctor/consultant and the midwife. The quality of advice appears to deteriorate from the point of delivery onwards in the opinion of UK parents. A quarter of respondents (38.7%) thought advice from their doctor/consultant to prepare them for post natal care was poor or very poor. The percentage of parents that thought advice from their doctor to prepare them for admission in a neonatal unit was poor or very poor was 32.4. Over half the parents (51.64%) rated as poor or very poor the advice their doctor/consultant gave to prepare them for caring for their babies after discharge from hospital. Midwives fared better, as fewer (41.08%) parents considered their advice on post discharge as poor or very poor. Parents were also asked about the advice they were given by their midwife on feeding their babies. Nearly a third (30.6%) felt this advice was good or very good and a quarter (25.1%) thought it was reasonable. However, over a third (37.3%) felt their midwife's advice in this area was poor or very poor.

The feedback from parents for the advice given to them by their medical team was compared across the six countries taking part in the survey. Selecting 'very good', 'good' or 'reasonable' can be considered a positive response. Firstly, for the advice given by the doctor or consultant to prepare parents for delivery in the UK is similar to the other countries surveyed. In the UK 84.8% of parents gave a 'positive' rating. A similar percentage (84.3%) gave positive ratings in Ireland, which was the lowest percentage. The highest being the USA at 91.94%. The UK had the lowest percentage of parents rating this advice as 'very good' (31.4%). Again the USA was

(Table 5.5) **(table quality and appearance to be enhanced)**

Table showing the frequency of positive and very good ratings of Doctor/Consultant advice in the countries surveyed.

		UK	Ireland	USA	Canada	Australia	New Zealand
D/C advice on preparation for delivery	Positive rating	84.8	84.3	91.9	87.0	90.7	86.5
	Very good rating	31.4	42.6	54.4	41.3	47.1	33.3
D/C advice on post natal care	Positive rating	53	61.0	85.1	69.8	75	65.0
	Very good rating	11.6	22.0	35.4	19.5	24.0	16.8
D/C advice on admission to neonatal unit	Positive rating	49.8	54.3	73.9	68.6	67.1	58.9
	Very good rating	14.0	21.2	35.7	23.4	25.0	17.8
D/C advice on caring for babies after discharge	Positive rating	35.2	42.6	75.6	57.5	65.0	51.1
	Very good rating	8.1	13.7	32.3	18.9	17.2	14.0

highest, at 54.4%. A similar pattern emerged for the advice given by doctors/consultants to prepare parents for post natal care. Positive responses were lowest in the UK (53.0%) and highest in the USA (85.1%). Ratings of 'very good' were also lowest in the UK (11.6%) and highest in the USA (35.4%). The drop in the positivity of feedback on post natal advice was not unique to the UK, but occurred in all six of the surveyed countries. The frequency of positive feedback on advice dropped further for the advice given by doctors and consultants on admission to a neonatal unit. Again the UK was the least positive (49.8%) and the least 'very good' (14.0%) and the USA the most positive (73.9%) and the most 'very good' ratings (35.7%). The lowest frequency of positive feedback was for the advice given by doctors and consultants on caring for babies following discharge from hospital. In the UK just over a third of parents responded positively (35.2%) with only 8.1% rating the advice as very good. In the US three quarters of respondents gave positive feedback on the advice (75.6%) with 32.3% rating the advice as very good. This variation in rating may be due, at least in part, to international differences in the roles performed by different healthcare professionals. Provision of advice regarding certain aspects of maternity may be considered to be the role of the midwife, or the local maternal child health nurse for example, rather than the consultant.

(Table 5.6) **(table quality and appearance to be enhanced)**

Table showing the frequency of positive and very good ratings of midwife advice in the countries surveyed.

		UK	Ireland	USA	Canada	Australia	New Zealand
Midwife advice on preparation for delivery	Positive rating	64.4	69.6	7.4	8.4	63.2	77.3
	Very good rating	17.0	27.6	4.1	3.7	22.8	33.2
Midwife advice on post natal care	Positive rating	54.0	63.1	7.1	8.1	65.6	73.6
	Very good rating	13.3	21.9	3.0	4.0	22.3	29.7
Midwife advice on admission to neonatal unit	Positive rating	39.9	53.9	6.8	5.7	51.4	59.0
	Very good rating	10.5	21.1	3.2	2.0	18.4	23.4
Midwife advice on caring for babies after discharge	Positive rating	49.3	61.7	5.7	6.0	69.8	69.4
	Very good rating	12.9	22.6	3.0	3.7	23.2	27.7
Midwife advice on feeding babies	Positive rating	55.7	64.5	6.3	7.0	71.4	74.0
	Very good rating	15.0	23.8	3.0	4.0	29.2	29.2

The survey gained feedback on the advice given to parents by their midwife, on the same topics as the advice from doctors. Midwives' advice on preparation for delivery was generally less often positively rated than that of doctors. In New Zealand 77.3% of parents rated the advice positively, and a third (33.2%) very good. Interestingly the lowest scores came from the US (7.4% positive) and Canada (8.3% positive). Most respondents in these countries selected 'not applicable' for this question (USA 91.3%, Canada 89.6%) indicating that either this is an area that midwives generally do not advise parents on, or that in North America parents do not have a midwife assigned to them, or have appointments with them prior to delivery. The data in the table show that parents' evaluation of advice from midwives on postnatal care was very similar to that for delivery, but showing a drop in positive responses of between 0.31% (in Canada) and 10.4% (in the UK). A further fall occurred in the positive responses for advice on admission to the neonatal unit. Positive responses were given by less than half (39.9%) of the parents in the UK completing the survey. The number of positive responses given by respondents living in Ireland, Australia and New Zealand also fell, and the percentage of positive responses from parents in the USA and Canada was again extremely low. Parents were happier with the advice they received from their midwife to prepare them for caring for their babies following their discharge from hospital. Aside from North America, parents in the UK were the least happy, with 49.3% giving positive feedback. Parents in New Zealand were for all the previous questions the most positive. For this question they were only very slightly less positive (69.4%) than parents from Australia (69.8%), but still led in terms of 'very good' ratings (27.7%). Midwives advice on feeding babies can be seen as their second best area of expertise, in terms of passing on information to parents in an effective way. In general this area was rated almost as positively as midwives' advice on preparation for delivery, and in Australia it was rated even more positively (71.4 versus 63.2%). Again, parents from North America gave very few positive ratings. The UK score was the lowest of the remaining four countries, with 55.7% of parents giving a positive rating to the advice, with New Zealand again giving the highest percentage of positive scores (74.0%).

(Table 5.7) **(table quality and appearance to be enhanced)**

Table showing the frequency of positive and very good ratings of access to services in the countries surveyed.

		UK	Ireland	USA	Canada	Australia	New Zealand
Access to screening	Positive rating	73.2	54.1	87.2	76.2	78.7	80.6
	Very good rating	25.1	18.5	51.4	35.9	37.4	35.5
Access to parentcraft/ prenatal sessions	Positive rating	50.5	53.4	68.2	60.6	64.1	57.9
	Very good rating	9.1	15.1	25.3	19.4	20.0	15.7

Feedback regarding access to certain services was also sought. In the UK access to screening was rated highly positively. A quarter (25.1%) of parents completing the survey thought access was very good and another quarter good (24.2%). Access was 'reasonable' in the eyes of another quarter (23.9%) of parents. This is unsurprising considering the number of mothers in the UK receiving more, and often far more, than the standard two scans. Access to parentcraft and prenatal sessions was rated somewhat less positively. This was rated as very good by only 9.1% of parents, and good by a further 16.6%. Almost a quarter thought this access was reasonable (24.8%), but access to parentcraft and prenatal sessions was rated as poor or very poor by over a third (39.5%) of survey respondents. As this refers to NHS provision of general parent education sessions it may indicate why there is a need for provision outside of the NHS, particularly provision specific to multiples.

Looking at all of the countries surveyed, parents were generally happy with their access to screening. Those in the USA were the most satisfied with the provision in their country, as the vast majority (87.2%) thought access was reasonable or better, with over half (51.4%) felt access was very good. Those parents living in Ireland were the least happy with the access to screening that they were given, although over half (54.1%) still rated the access positively. Parents in Ireland did not tend to receive less scans than parents in the other countries, so opinions on their access to scans may refer to the distance they needed to travel, or the convenience of appointments for scans. Ireland did differ from other countries in terms of the screening test for Down's Syndrome and subsequent advice. This may also have been reflected in parents' evaluation. Results for the UK were also comparatively low. Similarly to Ireland, the number of scans received in the UK was in line with the other five countries surveyed, so those parents who thought access to scans was poor (or very poor) may have been referring to practical concerns for actually having the scan, rather than the number offered.

As stated earlier, very few UK parents thought that their access to NHS provision of parentcraft or prenatal session was 'very good'. This was, in fact, the lowest percentage of any of the six countries surveyed, possibly indicating that the UK has the poorest healthcare system provision of prenatal parent education. The USA appears to have the best provision, as the most (68.1%) parents there gave a positive response to the access they experienced, with a quarter (25.3%) believing access to these sessions was 'very good'.

The final table (Table 5.8) shows the percentages of mothers responding to the survey in each country that developed each of the listed conditions during their pregnancy with multiples. High blood pressure was the most commonly suffered medical condition, by almost a quarter of mothers on average (24.1%). This is followed by hyperemesis gravidarum. Extreme morning sickness was endured by an average of 17.3% of mothers, the highest incidence being in Australia, where 23% of mothers reported this occurring at some point in their pregnancy. Feto-fetal (twin to twin) transfusion was the most rare condition, reported in only 5.2% of all (Monochorionic and Dichorionic) pregnancies across the six countries surveyed. The lowest incidence was in Canada (2.5%) and the highest in New Zealand (6.5%). The incidence of feto-fetal transfusion was low as it can only affect monochorionic twins, which made up one third of those surveyed.

The UK reported below average incidence of all the conditions except feto-fetal transfusion. It was not at the extremes of the range of incidence for any condition and could be considered to have 'normal' frequencies of conditions affecting multiple pregnancies. The USA had higher than average incidence of all the listed conditions except feto-fetal transfusion. The frequency of reported cases of pregnancy induced diabetes could be of particular concern, as in the US this was 5.4% above the average. The frequency was even higher than average in Australia (15.2%, 5.5% above average). Here the incidence of extreme morning sickness was also well above average (5.7% higher) and the frequency of the other three conditions was also higher than the average for all six countries.

(Table 5.8) **(table quality and appearance to be enhanced)**

Table showing the reported frequency of pregnancy related conditions in the countries surveyed.

Country / Condition	UK	Ireland	USA	Canada	Australia	New Zealand	Average
High blood pressure	23.5	28.8	27.3	19.6	24.8	20.4	24.1
Pre-eclampsia	14.8	18.1	19.6	8.6	18.0	13.3	15.4
Feto-fetal transfusion	6.3	5.4	4.6	2.5	6.0	6.5	5.2
Pregnancy induced diabetes	6.7	8.5	15.1	8.4	15.2	4.2	9.7
Hyperemesis gravidarum	14.6	12.1	20.3	18.5	23.0	15.4	17.3

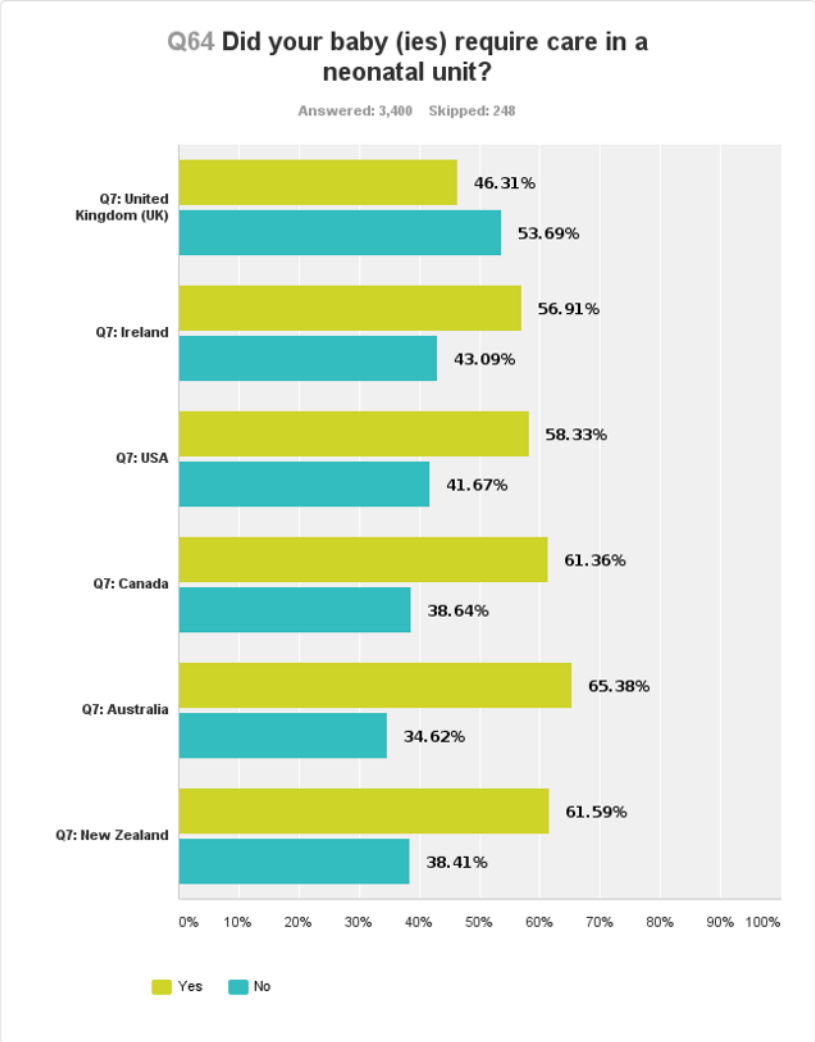
Neonatal Care

Chart 6.1 (below) shows the percentage of respondents whose babies required care in a neonatal unit. The percentages for four of the countries were fairly similar (within 8.5%). The highest incidence for requiring care in a neonatal unit was reported in Australia (65.4%), which may be a reflection of its higher than average incidence of various conditions developing during pregnancy as discussed above. The lowest proportion of births that resulted in the need for specialist neonatal care occurred in the UK.

The high percentage of babies requiring care in a neonatal unit resulting from multiple pregnancies (58.3% on average across the six countries) should not come as a surprise. Babies are admitted to a neonatal care unit for a number of reasons, one of which is premature birth, particularly before 34 weeks (www.nhs.uk/Conditions/pregnancy-and-baby/pages/baby-special-intensive-care.aspx). As was discussed earlier, in this study, 52.9% of births took place between 24 weeks and 36 weeks).

The majority of parents whose babies had required neonatal care were able to stay together at the same hospital. The lowest percentage (81.7%) was reported in Canada, and the highest (90.1%) in the USA. In the UK 86.9% of parents reported being able to stay together if their babies were in neonatal care. This was just above the average percentage of 86.0%. Parents completing the survey reported that in most cases the hospital automatically offered to keep all the babies together. Again, the lowest percentage was in Canada (84.8%). The highest percentage of automatic offers was in Ireland (93.0%). In some cases it was not possible for the babies to stay together. Rarely in the UK (2.4% of respondents) parents had to

(Chart 6.1) **(chart quality and appearance to be enhanced)**



argue for places for all of their babies. In 5.2% of cases in the UK parents were told that it would not be possible, but then enough places became available at the right time, allowing the babies to stay together. A very small percentage of parents were less fortunate, as they were in the same situation, but sufficient places did not become available in time. In 4.2% of UK survey respondents' cases clinical needs meant that the relevant treatments and services could not be provided at a single hospital. In Australia, this situation occurred in 2.5% of all cases.

In situations where families were separated across different hospitals this was, in many cases, for less than a week. In the UK over half the families (59.7%) were separated for less than a week. This was the second highest percentage, behind Canada (63.0%). An average of 24.2% of separated families were so for between one and two weeks. The UK was just below this figure, at 22.6%. Very few families in the UK were separated for longer than this. Percentages were the same for 3-4 weeks and over 8 weeks (3.2%) and for 4-5 and 5-6 weeks (6.5%). Percentages of families in the six countries being separated for over two weeks varied greatly. Each country had at least one category (some had two) that was not selected by any parents. In the USA this happened for 3-4 weeks, whereas in Ireland 17.7% of parents were separated for this length of time. In New Zealand a quarter of the families that had been separated across different hospitals had been kept apart for more than 8 weeks. In

the UK this happened to only 3.2% of families that were separated.

Over half (60.2%) of the parents of multiples receiving neonatal care (in a NICU) were able to stay at the hospital or close by in temporary lodging (such as a hotel, a Ronald McDonald House or similar overnight accommodations). New Zealand appeared to be best able to provide this accommodation (71.5%), and Ireland least able to allow parents to stay at or near the hospital (43.0%). The UK was above average, as 64.9% of parents could stay close by their multiples.

Parents completing the survey were asked to indicate which level(s) of care that babies were in, if they were cared for in a neonatal unit. Levels of care used varied between the countries. In four of the countries surveyed care was most often at Level 1, given in a specialist care baby unit. Each care level had been used by at least a quarter of respondents' multiples (except Level 2, high dependency, in New Zealand, at 23.4%). The greatest use of Level 3 care, the neonatal intensive care unit happened in the USA (66.0%), the least in Ireland (31.2%). Level 2 care was the least frequently used in every country. The lowest reported proportion was 23.4% in New Zealand, and the highest 37.9% in the UK. The USA reported the lowest frequency of requiring level one (SCBU) care (25.3%), the most frequent use was reported in Australia (75.5%).

It is possible to transfer babies between hospitals if they are in a primary or secondary level neonatal unit (but not in level three, neonatal intensive care). Parents whose babies were in primary or secondary levels of care were asked if their babies were moved to a unit closer to their home prior to their discharge. In most cases this did not happen. On average about a fifth (21.5%) of families had been moved to a closer unit. Babies were most often transferred between units in Australia (29.6%) and least often in the USA (13.6%). The frequency of transfers in the UK was average (21.8%).

Feeding

Most parents reported being able to feed their babies as they had planned. The UK had the most difficulties with feeding in the manner mothers had intended, as 29.5% reported being unable to feed as planned. New Zealand had the smallest proportion of respondents saying that they were unable to use the feeding methods they had wanted (18.4%). Breastfeeding was the most popular feeding method in five of the six countries, used by 62.2% of mothers in New Zealand, and 37.9% in the UK. Only 23.4% of parents in Ireland reported breastfeeding their multiples as planned. There formula was the most frequently used method of feeding. Express feeding was almost always the second most frequent method of feeding (25.8% in the UK, 41.5% in Australia) so, added together with breastfeeding, mother's milk was by far the most used feeding (over donor or formula milk). Very few parents made use of donor milk (the most was 3.3% in the USA). Some had decided to exclusively use formula milk, from 10.3% in New Zealand up to 30.6% in Ireland. A greater proportion of parents had decided to mix feed (an average of 27.0%) so these babies too were receiving some milk from their mother.

Over half of the parents completing the survey (53.6%) had been unable to breastfeed initially because their babies were born at an early gestation. Most of these parents (an average of 74.6%) reported having been taught and given help with expressing breast milk. This percentage was broadly similar across the six countries (ranging from 61.5% in Ireland to 84.2% in New Zealand). There was more variation between the countries surveyed regarding the information given about expressing milk to those parents who were able to breastfeed at birth. Ireland was the

only country in which more parents had not been given any information (50.7%). The percentage in that had been given information about expressing milk in the other countries ranged between 60.0% in the UK and 84.2% in New Zealand.

Survey respondents resident in the UK were asked if they were supported to achieve their feeding preferences. Over two thirds of UK respondents said that they were supported in some way (as 31.5% had said no, they were not supported). The majority of this support, for 64.4% of respondents, came from health professionals, such as the doctor, consultant or midwife. Relatively few parents in the UK completing the survey felt they had received support from other sources. The next most frequent source was the NCT (National Childbirth Trust), which had supported 6.7% of parents, and next the Breastfeeding Network (5.3%). Other sources of support were La Leche League (2.9%), Twinline volunteers (1.9%) and the MBF (0.4%). Tamba Peer Supporters had also provided support to UK parents to achieve their feeding preferences; this was in 3.2% of reported cases.

Support to achieve feeding preferences appeared to be more widespread in New Zealand, where only 10.7% of respondents reported not being supported at all. Families in New Zealand generally receive support from more than one source, as the total percentage stating that yes they did receive support was 221.4%. By far the most common source of support was the family's hospital or community midwife (71.7%). Nearly half (44.8%) of the New Zealand respondents reported receiving support from a hospital lactation consultant. Over a third (35.5%) were supported by a neonatal nurse/member of staff, or by a Plunket nurse, Plunket lactation consultant or a Plunket family centre. Support in New Zealand also came from Multiple Birth Club volunteers (15.2%), La Leche League volunteers (6.9%), a private lactation consultant (5.9%) or by another healthcare professional (5.9%). This high level of support may explain why 62.2% of mothers breastfed, and New Zealand had the smallest proportion of respondents saying that they were unable to use the feeding methods they had wanted (18.4%).

High levels of support were also evident in Canada, where 81.7% of respondents felt they had been supported to achieve their feeding preference. In line with the UK and New Zealand, health professionals were the most frequently reported source of support (65.1%). For nearly half of the Canadian families this was the public health nurse/specialist (47.0%) and/or their lactation consultant (38.8%). Support was also given by local MBC members (13.0%), a local breastfeeding network (8.9%), La Leche League (7.1%) MBC peer health worker or breastfeeding support person (4.4%) and MBC's support network chair (1.8%).

Sleeping Arrangements

In total, half of the parents completing the survey were given information on safe sleeping for multiples and half were not (50.5% vs 49.6%). Information was often given in New Zealand (66.1%). The UK was less than average, as 43.7% of parents had been given information on safe sleeping.

Most families (86.2%) had all their babies discharged from hospital at the same time. New Zealand had the highest frequency for this 95.4%, and the USA the least (66.2%). Multiples in UK hospitals were discharged together in 92.4% of reported cases.

Less than half of the multiples overall were co-bedded when they were born. Most (41.6%) families reported having all multiples co-bed in the same cot, and a further 4.0% were co-bedded in the same

incubator. Over a quarter (27.3%) of newborn multiples were put in separate incubators on the same ward, and another quarter (25.5%) were placed in separate cots on the same ward. Nearly a fifth of newborn multiples (18.4%) could not be placed together as they were undergoing treatment. Patterns for co-bedding after birth were similar across each of the six countries. The highest proportion of multiples being co-bedded in the same cot occurred in the UK (54.3%), the lowest in the USA (17.5%).

Most parents co-bedded their multiples when they got them home. Six out of ten multiples (62.1%) were placed in the same cot/crib, and 14.5% were placed in the same moses basket/bassinet. Numbers for co-bedding in the UK were around average, when adding together the 57.7% of multiples being placed in the same cot or crib (below average) and the 18.9% being placed in the same basket or bassinet (above average). Co-bedding of multiples at home was most common in Canada, where 75.2% of multiple babies slept in the same cot or crib.

Overall a fifth of babies (21.3%) slept in a separate room from their parents. The remainder slept in the same room as their parents for a number of months. This was most often for six months (17.5%) and next most frequently for three months (11.2%). Some multiples slept in their parents' room for each number of months up to 12, varying from 0.6% to 8.4% for each number of months, with the higher percentages being within the first six months. There was a rise in frequency for over 12 months of sleeping in the parents' room (6.3%). It was far more common for families residing in the UK and Ireland to have their babies sleep in the same room. In the UK only 6.1% of babies slept in a separate room from the parents and in Ireland this was 4.8%. In the UK a quarter of babies (25.0%) remained sleeping in the same room as their parents for 5-6 months, with over two thirds (69.1%) sleeping there for up to six months. Australia and New Zealand had the lowest percentages of multiples sleeping in the same room as their parents (43.6% and 43.1%, respectively). This trend may be a reflection of parent's choices, advice received, or simply a practical matter relating to the average size of homes in the different countries.

Almost a fifth (19.4%) of multiple babies slept in the same bed as their parents at some point during the first six months of their lives. There was a 10.4% difference between the lowest incidence of this (13.7% in the USA) and the highest (24.1%). The UK was just above average for parents and multiples sleeping in the same bed (22.0%).

Zygosity

A quarter of the multiples born to parents completing the survey were monozygotic (25.1%) and therefore identical. 71.5% were dizygotic, or fraternal, and 5.6% of parents did not know the zygosity of their children. Little variation was seen between countries (range of 4.7 for monozygotic).

The zygosity of multiples was most frequently known by looking at the physical features of the babies (51.4%). A third (33.1%) of parents overall knew the zygosity of their children because the team at the hospital had confirmed this from the scan as they shared one placenta. In 9.1% of cases the sharing of the single placenta had been confirmed by the hospital from the afterbirth. Other parents had had a DNA test performed privately (5.5%), studied the behaviour of their babies (3.5%) or had a test done during pregnancy for medical reasons (3.2%). The method by which they knew the zygosity of their multiples was not known by 14.5% of those parents who did know the zygosity. In the UK a greater than average percentage of parents knew

the zygosity of their multiples through the scan (37.5%) and less than the average percentage relied on looking at the physical features of their multiples (46.1%). More UK parents than the average for all other six countries did not know by what means they knew the zygosity of their children (18.2%).

Cases in which parents were told at birth that their multiples were one zygosity, to find out later through DNA testing that they were the opposite were very rare, reported by only 2.8% of those parents that answered the question (it was skipped by 35.6% of respondents). The lowest incidence of this was in the UK (2.0%) and the highest in New Zealand (4.5%).

Tamba Maternity Services Survey Report September 2014

Conclusions

Conclusions

This survey gained feedback from parents about the multiples association in their own countries. Comparing data from the six nations involved, and the different locations within the UK, highlighted some areas in which some associations could improve their practice, or seek to share best practice with others. Few mainland UK parents were informed about TAMBA by their medical team. This is an area in which TAMBA could seek advice from Northern Ireland, as a greater proportion of parents there were informed about TAMBA by a member of their medical team. It may be the case that in Northern Ireland there are one or two key members of staff in the limited number of hospitals used for the delivery of multiples that inform parents about TAMBA there. This 'branch' of TAMBA could also share its practice regarding the uptake of parent education sessions and the use of association materials, as it was most 'successful' in that area. Further research could establish the other ways in which parents are informed about their association, outside of their medical team, and about parents' use of non-TAMBA/multiple association resources.

Medical practices had many similarities across the six nations, but also some differences. Parents of multiples living in the USA were far more likely to see specialists and have 'specialist' discussions than parents in other countries, particularly the UK. This multiples specialism in the US could account for the quality of the advice given by doctors and consultants, which was most frequently positively reviewed in the US. In the UK, this advice from doctors/consultants and also midwives was not rated very positively. It was generally considered to be less helpful when referring to postnatal issues. Advice to prepare parents for delivery was often good, but it could be seen that, at least in terms of the advice given by medical teams, once parents were back home with their multiples, they were on their own. This lack of good advice in the UK highlights the real need for advice and parent education that TAMBA addresses, and also for greater postnatal input from midwives

Advice from midwives was mostly not applicable in the US and Canada, and rated most highly in New Zealand. Lessons may be learned here about the roles that midwives play in the medical process in each country. It may be that in some countries parents may see only one midwife and are better able to develop a relationship with that person, who is then best able to understand their needs and provide personalised advice. In general, advice from midwives was more highly regarded than that from doctors post delivery. Midwives also gave parents the most positively rated advice in the areas of preparation for delivery and of feeding babies. Midwives may then be the most effective way of reaching parents with current best practice.

Midwives can also be key players in supporting parents to feed their babies as they had planned. Data from certain countries highlighted the importance of a lactation consultant in this process, this role appeared to be non-existent in the UK. This is because it is not usually a separate person in the UK, but a role performed by midwives, who, it could be argued, are all trained as 'lactation consultants'. Time available with each client is probably the major factor in how much advice regarding lactation midwives are able to give. A valuable source of support in New Zealand and Canada was the local Multiple Births Clubs members. This may be an area that TAMBA should look to develop, using parents themselves in local support networks, possibly with specialisms such as feeding.

Parent feedback on access to scans and to parentcraft and prenatal sessions highlighted a possible area of weakness for the UK. Whilst the UK appears to provide similar number of scans to other countries, the access to these scans received a low level of positive feedback. Further investigation into the reasons for this are recommended, as there may be a number of practical reasons why parents felt they did not have good access, which may be addressed. Here lessons may be learned from the USA, where access to scans, and to parentcraft and prenatal sessions was thought to be good.

Facilities in hospitals may need to be reconsidered. The survey found that if multiple babies required an incubator they

were very rarely co-bedded, most likely due to the nature of the baby's medical issues. As most babies that can sleep in a cot are co-bedded in hospital it would seem that allowing multiples to co-bed is deemed best practice. It may be beneficial to examine whether faculties or established practices could allow multiples requiring incubation to also benefit from being kept together with siblings as they sleep.

This report has compared aspects of the medical care and support that parents of multiples receive throughout pregnancy, delivery and after the birth in six countries. This comparison allows identification of areas of possible strength and weakness in each country, and how effective different approaches to maternity services may be for parents of multiples. The ideal result of this, and further, research is that best practice is highlighted and shared between countries, potentially through TAMBA and its sister associations in the other countries involved in this research. The various multiples associations themselves may also be able to improve their own practice by considering the feedback from parents of multiples.

Tamba
TWINS & MULTIPLE BIRTHS ASSOCIATION