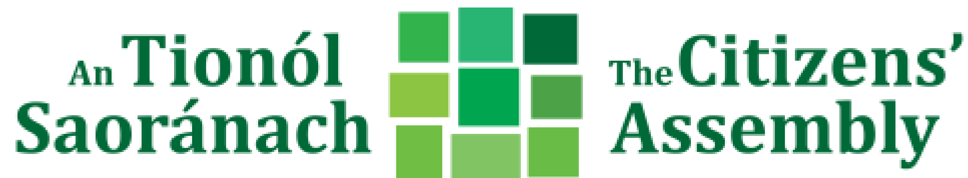

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Termination of Pregnancy a Fetal Medicine Perspective

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Background

Forty years ago Parliament passed a private members bill ensuring that doctors who performed abortions under certain circumstances, would not be performing an unlawful act. This law was brought into use in England, Wales and Scotland, but has never been adopted in Northern Ireland. It was subsequently amended by the Human Fertilisation and Embryology Act 1990 however despite subsequent attempts no further amendments have been passed. Therefore it is still an offence to procure an abortion unless two independent medical practitioners are of the opinion, formed in good faith, that the case meets at least one of the criteria below. There is however one exception to this, when an emergency termination of pregnancy is required in order to immediately save the woman's life, or to prevent grave permanent injury to the physical or mental health of the pregnant woman. In this rare scenario, only 11 cases in England and Wales in the last 10 years, a single medical practitioner's signature is required. More than one of these criteria can be met in any individual case.

Clauses for Termination of Pregnancy as amended by the 1990 HFEA Act

A. The continuance of the pregnancy would involve risk to the life of the pregnant woman greater than if the pregnancy were terminated
B. The termination is necessary to prevent grave permanent injury to the physical or mental wellbeing of the woman
C. The pregnancy has NOT exceeded its 24th week and that the continuance of the pregnancy would involve risk, greater than if the pregnancy were terminated, of injury to the physical or mental health of the pregnant woman
D. the pregnancy has NOT exceeded its 24th week and that the continuance of the pregnancy would involve risk, greater than if the pregnancy were terminated, of injury to the physical or mental health of any existing child(ren) of the family of the pregnant woman

E. There is a substantial risk that if the child were born it would suffer from such physical or mental abnormalities as to be seriously handicapped.

It is important to note that only clauses C and D are gestation dependant. All figures quoted are from the Office of National Statistics or the Central Statistics Office of the Republic of Ireland. In 2014 there were approximately 871,000 conceptions in England and Wales, with 697,000 births. In comparison the number of births in the Republic of Ireland was 67,000 for the same time period, that is approximately 10% of that of England and Wales. There were 191,014 abortions performed in England and Wales in 2015[1] the most recent data available..

Legal Abortions England and Wales 2015 by Clause

England and Wales, residents — numbers

Grounds	Total	Gestation weeks 3 - 9	10 - 12	13 - 19	20 and over
Total abortions	**185,824**	**149,034**	**21,248**	**12,665**	**2,877**
A (alone, or with B, C, D) or F or G	**91**	18	8	42	23
B (alone, or with C or D)	**131**	84	22	18	7
C (alone)	**181,231**	148,102	20,570	10,758	1,801
D (alone, or with C)	**1,158**	816	259	83	0
E (alone, or with A, B, C or D)	**3,213**	14	389	1,764	1,046

Abortion for Fetal Abnormality

Of all these abortions however only 3213 were performed under clause E, ie where there is a substantial risk that if the child were born it would suffer from such physical or mental abnormalities as to be seriously handicapped. There is a slight issue with some of these figures however as it has been reported that larger numbers of fetal anomalies that undergo abortion have been reported to the congenital abnormalities register, with a three year audit suggesting that only 54% of such cases were reported to the Department of Health. Therefore this figure may be higher. Although, as in the Republic of Ireland the main fetal anomaly ultrasound is performed at approximately 20 weeks gestation, it can be seen from the table below that only 512 of these abortions were performed after 22 weeks gestation.

Gestational age at time of termination of pregnancy England and Wales 2015 Clause E

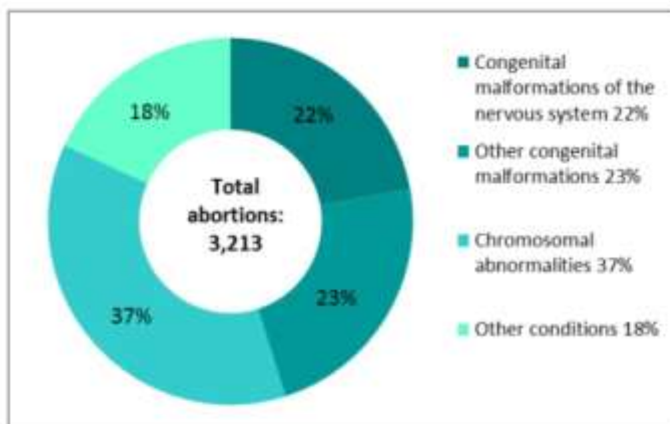
England and Wales, residents — percentages

Procedure	Gestation weeks for abortions performed under ground E						
	Total	under 13	13 & 14	15 & 16	17 to 19	20 & 21	22 and over
Total abortions	**3,213**	**403**	**875**	**508**	**381**	**534**	**512**
Surgical	***26***	***53***	***42***	***26***	***16***	***4***	***8***
Vacuum Aspiration	***13***	*40*	*29*	*3*	*0*	*0*	*0*
Dilatation and Evacuation	***9***	*5*	*12*	*21*	*13*	*4*	*0*
Feticide with a surgical evacuation [1]	***4***	*8*	*2*	*3*	*3*	*1*	*8*
Medical	***74***	***47***	***58***	***74***	***84***	***96***	***92***
Antiprogesterone with or without prostaglandin	***57***	*46*	*57*	*72*	*82*	*80*	*7*
Other medical agent	***1***	*0*	*0*	*2*	*2*	*2*	*0*
Feticide with a medical evacuation [2]	***16***	*0*	*0*	*0*	*0*	*14*	*85*

[1] includes feticide with no method of evacuation and surgical 'other'.
[2] includes 8 cases where use of feticide was not confirmed at time of publication.

The indications for Abortion under clause E are predominantly for a chromosomal or central nervous system difference, with these two factors accounting for 59% of all cases. The commonest chromosomal difference identified as a reason for abortion was Trisomy 21, which is not surprising given the prevalence of this condition and the established antenatal screening programme in England.

Indications for termination of pregnancy under clause E England and Wales 2015



The Republic of Ireland Experience

Of the 5190 women who underwent termination of pregnancy in England and Wales whose post code was outside those two countries, 66% were from the RoI and a further 16% from Northern Ireland. Of the 3451 citizens of the RoI 135 women travelled to England or Wales, most commonly Liverpool, London or Birmingham in order to have an abortion under clause E of the Act. The fetal indications for these abortions are shown below.

Indications for termination of pregnancy under clause E 2015 Irish Republic residents

Irish Republic residents

			principal mentions	number of mentions
Total ground E alone or with any other [1]			**135**	
Q00-Q07	**the nervous system total**		**57**	**87**
	Q00	anencephaly	7	8
	Q01	encephalocele	2	2
	Q02	Microcephaly	1	1
	Q03	hydrocephalus	3	3
	Q04	other malformations of the brain	1	2
	Q05	spina bifida	9	10
	Q06-Q07	other	0	4
	Q20-Q28	the cardiovascular system	10	19
	Q35-Q37	cleft lip and cleft palate	0	1
	Q38	Congenital malformations of digestive system	0	1
	Q60-Q64	the urinary system	4	8
	Q65-Q79	the musculoskeletal system	13	19
	Q86-Q89	other	7	9
Q90-Q99	**Chromosomal abnormalities total**		**69**	**72**
	Q90	Down's syndrome	40	42
	Q910-Q913	Edwards' syndrome	13	13
	Q914-Q917	Patau's syndrome	7	7
	Q92-Q99	other	9	10
	other conditions total		**9**	**10**
	P00-P04	fetus affected by maternal factors	1	1
	P05-P08	fetal disorders related to gestation and growth	0	0
	P83.2-P833	hydrop fetalis not due to haemolytic disease	1	1
	O30	multiple gestation	2	2
	E849	Cystic fibrosis	1	1
	G71.0	disorder of the muscles	1	1
	D18.1	Cystic Hygroma (Lymphangioma)	3	4

ICD-10 codes are taken from the International Statistical Classification of Diseases and Related Health problems (Tenth Revision) published by the World Health Organisation (WHO)

Again there is preponderance for chromosomal differences and differences of the nervous system as with all cases aborted under clause E. Unlike women from England and Wales

there is an increased number of women who undergo surgical termination of pregnancy after 20 weeks gestation

Care Pathway for women with a diagnosed Fetal Abnormality

As explained in previous sessions detailed anomaly scans of fetuses are performed at approximately 20 weeks gestation. In England and Wales if a difference is found a pathway is followed that may include a second local scan to confirm the diagnosis by an Obstetrician with a special interest in fetal medicine. In some cases these people will be able to fully counsel women regarding the outlook for her baby, and in others referral to a recognised fetal medicine unit will take place. We attempt to see women within three working days of referral and patients are scanned by a specialist in fetal medicine and then sat in a more homely room and counselled in the presence of a midwife. All possible options are discussed with the women including, where appropriate, intrauterine fetal therapy and termination of pregnancy. On leaving the woman is given a detailed report which is read through with her prior to her leaving and contact numbers for the fetal medicine centre are given. A subgroup of women may need additional investigations, both invasive and non invasive and some will require counselling by a specialist in another field. It is important to acknowledge that women will need differing amounts of time to come to terms with this information and make their decision.

If the woman opts for termination of pregnancy this will be arranged at her local unit and depending on the gestational age both surgical and medical termination techniques are discussed with the woman. As there is an increasing chance of fetuses being born alive after 22 weeks gestation the Royal College of Obstetricians and Gynaecologists recommends that the fetal heart is stopped by performing feticide prior to the termination for cases after 22 weeks gestation unless the fetal abnormality is not compatible with life[2].

Feticide is achieved by placing a needle under ultrasound control through the maternal abdomen and uterus and into the blood vessels of the baby. The baby is then administered a neuromuscular blocker, to prevent it moving off the needle, in the same fashion as is administered to adults undergoing surgery, and the fetus is then injected with either potassium chloride or lidocaine, both of which stop the heart beating. Confirmation that the

fetal heart has stopped is performed at 5 and 45 minutes. If the woman has opted for a medical termination of pregnancy a tablet, an anti-progestagen, is administered and admission arranged for induction of labour with prostaglandin approximately 36 hours later. Around 95% of women will deliver on the day they receive their prostaglandins. A small proportion will require a second course and infection, haemorrhage and retained placental tissue are the main complications of the procedure.

When women who are beyond 24 weeks gestation request termination of pregnancy in our unit we have a multidisciplinary meeting to gain a consensus as to whether we believe that "there is a substantial risk that if the child were born it would suffer from such physical or mental abnormalities as to be seriously handicapped". These meetings as a minimum require a hospital manager, 2 clinicians capable of performing the procedure, at least one neonatologist and at least one fetal medicine midwife.

If termination is to be performed surgically this requires a clinician with a certain skill set and appropriate referral to these clinicians is made. Often after surgical termination post-mortem results are not available. We generally recommend that post mortems are performed on fetuses that are terminated because of a structural difference as in approximately 70% of cases a perinatal pathologist will detect additional information which often leads to a change in counselling.

Regardless of the mode of termination of pregnancy it is considered good practice to offer women follow up appointments to rediscuss events and the risk to future pregnancies. This is a service that Irish women tend not to receive to a lesser extent than their English counterparts.

Cases Studies

These cases are not actual cases but are representative of cases that we see.

1 Microcephaly

A woman who had a previously small baby had an uneventful pregnancy until 28 weeks gestation. She declined combined first trimester screening for trisomy 13, 18 and 21 and her scan at 20 weeks gestation was within normal limits. A scan performed to assess fetal growth at 28 weeks gestation showed that the fetal head circumference was small. Following referral to a fetal medicine centre these findings were confirmed and the fetal head circumference was 5.5 standard deviations below the mean for gestation. This is a very small head and although antenatal diagnosis of microcephaly is difficult, anything greater than 5 standard deviations below the mean is thought to be diagnostic. No other structural differences were seen in the baby and following counselling the couple opted for invasive prenatal diagnosis. An amniocentesis was performed and the results subsequently showed a normal fetal karyotype. At the time of the amniocentesis a plan was put in place to perform a fetal MRI and arrange an appointment with a paediatric neurologist if the chromosomes were normal. This plan was therefore enacted and when the couple were reviewed again at 31 weeks gestation the repeat ultrasound confirmed the previous findings. With this knowledge the couple requested termination of pregnancy and following an MDT two independent practitioners signed the HSA1 form, indicating that in good faith they were of the opinion that there was a substantial risk of significant handicap.

The couple therefore underwent a feticide and medical termination of pregnancy with a post mortem examination being performed.

2 Selective Reduction

A woman presents at 11 weeks gestation and the ultrasound shows a monochorionic, diamniotic twin pregnancy. This is a pregnancy with two amniotic sacs but a single placenta. The twins are therefore 'identical' and their blood supplies are connected. One of the twins had anencephaly, a condition where the neural tube does not close at the cranial end and the brain tissue is gradually destroyed prior to birth. Although these babies may be able to

breathe and suck following birth they only have primitive brain stem function and the condition is generally considered a major abnormality. There is no inutero therapy for this condition and therefore the options are to continue with the pregnancy with all the risks that a monochorionic twin pregnancy has, terminate the whole pregnancy or to perform a selective reduction of the pregnancy coagulating the blood vessels in the affected fetus in order to separate the two circulations

In most multiple pregnancies where there is a structural difference present in one fetus the other will be discordant for this difference. Indeed only 18% of identical twins will have the same structural difference and the rate for dizygotic twins is similarly low. Therefore when a structural difference and abortion is the option chosen by the patient a selective termination of pregnancy is usually required. In this case the best chance of having a healthy live baby is to perform selective reduction.

Summary

Although termination of pregnancy is a common procedure in England and Wales only 2% are performed under clause E and in 2015 only 500 cases were performed under clause E after 22 weeks gestation. Termination of pregnancy in England and Wales is presented as one of the options available to women if their fetus is at substantial risk of significant handicap. Parliament has not defined either substantial nor significant but have purposefully left it to the medical profession to make these decisions in good faith. Finally over 3000 women a year travel from the Republic of Ireland to England or Wales for a termination of pregnancy and in 2015 135 of these had a termination of pregnancy under clause E of the Abortion Act.

References

1. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/570040/Updated_Abortion_Statistics_2015.pdf
2. https://www.rcog.org.uk/globalassets/documents/guidelines/terminationpregnancyreport18may2010.pdf