

Irish Cervical Screening Programme  
ANNUAL REPORT **06**



IRISH CERVICAL SCREENING *programme*

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# About the Irish Cervical Screening Programme Phase One



# About the Irish Cervical Screening Programme Phase One

The Irish Cervical Screening Programme (ICSP) Phase One offers free cervical screening to women in the Midwest aged 25-60 years. The Programme has been in operation since October 2000, providing women with free smear tests.

Following the establishment of the National Cancer Screening Service (NCSS) by the Minister for Health and Children in January 2007, governance of the Irish Cervical Screening Programme was transferred to the National Cancer Screening Service Board. The establishment of the NCSS followed the publication of A Strategy for Cancer Control in Ireland 2006, which advocates a comprehensive cancer control policy programme in Ireland with cancer screening managed by one organisation.

Cervical screening is a preventative health measure as smear tests can detect early changes in the neck of the womb. The earlier a change is found, the easier it is to treat.

The International Agency for Research on Cancer confirms that organised cervical screening programmes are effective. An organised, quality assured cervical screening programme is estimated to achieve an estimated 80% reduction in mortality.

The service providers for the Programme are primary healthcare workers and smeaertakers in the Midwest who carry out approximately 22,000 smears annually through the Programme.

A central office based in Limerick manages the ICSP Cervical Screening Register. This register is a list of all eligible women in the screening region and is compiled from data sources and self registration. Eligible women can enter the Programme by invitation from the ICSP or directly at the discretion of a medical practitioner.

Letters of invitation are issued to eligible women (identified by their date of birth) on the Cervical Screening Register. The letter invites women to make an appointment for a free smear test with a registered ICSP partner such as her GP or medical practitioners in the primary care setting.

Smear tests are sent to one of two State sponsored cytology laboratories for analysis. The office also manages the Clinical Result Register which records womens' cytology, colposcopy and histology results for cervical samples. A colposcopy clinic in Limerick provides further investigation and treatment to women when required.

Quality assurance guidelines for the ICSP were published in 1999 that defined the protocols for repeat cytology tests and referral to colposcopy. A quality assurance framework of committees established in 2007 is reviewing the standards.

This structured organised approach ensures the appropriate follow-up care is provided. The ICSP is committed to delivering a quality assured service for women from smear taking, through analysis to diagnosis.





# Message from the Director



## Message from the Director

Welcome to the 2006 Annual Report of the Irish Cervical Screening Programme Phase One. This Report outlines programme data recorded on the Cervical Screening Register in 2006, when the ICSP was under the governance of the Health Service Executive (HSE).

The overall aim of the Irish Cervical Screening Programme is to reduce the incidence and mortality from cervical cancer among women aged 25-60. In 2006, the ICSP provided free smear tests to over 20,000 women in the Midwest. The detection rates for detection of cell changes in cytology are within international norms.

### Overall in 2006:

- The ICSP provided free smear tests to 20,278 women
- The uptake rate among eligible women was 62.2%
- The detection rate of women with histologically confirmed CIN or invasive cancer was 1.5%
- The positive predictive value of colposcopy referral in 2006 was 2.6%
- The referral rate for colposcopy in 2006 was 3.7%.

The Irish Cervical Screening Programme Phase One implemented a quality assured, population based, organised screening programme that proved invaluable in testing operational issues before introducing a national programme in 2008.

The target population of eligible women in the Midwest region reflects just under 10% of the population that would be eligible under a national cervical screening programme.

In January 2007, governance of the ICSP was transferred to the National Cancer Screening Service and since then a detailed programme for delivery of a quality assured National Cervical Screening Programme has been initiated.

A National Cervical Screening Programme will be made available to all women in Ireland aged 25-60 in 2008.

The ICSP operates a partnership approach in offering women the highest standards and best practice care available from initial smear taking through diagnosis and treatment.

The delivery of this service is made possible through partnership of the ICSP with registered smertakers – GPs, practice nurses and primary healthcare workers – and designated ICSP cytology, histology and colposcopy services.

I would like to take this opportunity to thank all those involved in the Programme for their dedication, expertise and continued commitment to providing women with a quality assured programme that prioritises women's health and wellbeing.



Dr Marian O'Reilly  
*Head of Cervical Screening  
National Cancer Screening Service*





# Programme Statistics



# Programme Statistics

An EU Network for information on cancer (EUNICE) has been established and is co-ordinated by the International Agency for Research on Cancer and co-sponsored by the European Commission. This Network is a collaboration of seven institutions and builds on the work of 120 European population-based cancer registries and results of European projects.

The main objectives of the collaboration are:

- To establish and operate the EUNICE network of data providers
- To provide the EU with updated and standardised indicators of cancer burden
- To ensure maximum availability of data on cancer through traditional publications and electronic media.

The EUNICE network comprises seven partners with experience in data collection, quality control and interpretation of data on cancer. These partners are:

- IARC (International Agency for Research on Cancer, Lyon)
- CPO Piemonte (Centre for Cancer Epidemiology and Prevention)
- IPH (Scientific Institute of Public Health, Brussels)
- Cancer Society of Finland
- Karolinska Institutet, Stockholm
- International Atomic Energy Agency, Vienna
- DZFA (Institute for Aging, Heidelberg)

A two year partnership agreement between the seven partners officially began on 01 September 2005 and is focussed on data collection and standardisation, analysis and production of indicators, the development of standards and guidelines and the dissemination of results.

The data from the first phase of the Irish Cervical Screening Programme is included in the EUNICE publication and for the first time, the statistical section of this 2006 annual report reflects that reporting arrangement.

## Note

- The invitation policy is specified for eligible women in the population excluding women who are not targeted for screening, e.g. hysterectomised women or women who choose not to participate.
- The time between negative smear tests is defined by the screening interval.
- The data source is the Cervical Screening Register information system using the Business Objects reporting tool.
- Only women who have given explicit signed consent for data transfer to CSR are included.



The report of the Department of Health Cervical Screening Committee published in December 1996 identifies the target age group, screening interval and call/recall mechanism.

A first programme smear can be as a result of an ICSP invitation letter issued to a woman or can be directly initiated at the discretion of her doctor (GP). A direct smear pre-empts an invitation letter being sent to the woman in the first five year screening interval.

**Table A1: Definition of the target population**

Area	Republic of Ireland Midwest Region – Limerick, Clare, N.Tipperary
Start of programme (month, year)	October 2000
Age at start of screening	25
Age at end of screening	60
What is the recommended interval between negative tests?	5yrs*
Groups excluded (if any) from target population (e.g. hysterectomised)	Total hysterectomy; women who chose to opt out of the programme

\* From June 2007 women aged 25-44 will be screened every three years and from 45-60 every five years

**Table A2: Protocol for referral to colposcopy**

Cytological Diagnosis	Women referred for colposcopy according to the protocol		
	No	Yes	
		All	
			After repeated test
Invasive Cancer		Yes	
HSIL		Yes	
LSIL	No		After 2nd consecutive
ASC-H		Yes	
AGC	No		After 2nd
ASC-US	No		After 3rd
Unsatisfactory	No		After 3rd consecutive
Negative		Yes Suspicious cervix	



Tables B1-B10 represent sub-populations between different tabulations. For example, women referred for colposcopy are also included as screened and women with a histologically confirmed CIN among those having had colposcopy. This allows computing the performance parameters listed.

**Table B1: Invitations, invitational coverage, and status of target population in the Irish Cervical Screening Programme in the year 2006**

Age (Years)	Number Resident Women (a)	Number Invited			Number Eligible (c)	% Eligible 100* c/a
		In the above Year	In the 5 year period (b)	% Invited 100* b/a		
<20	116				-	
20-24	2,749	110	111	4	940	34.1
25-29	13,304	3,035	9,472	71	11,898	89.4
30-34	20,114	862	12,852	63.8	16,854	83.7
35-39	18,048	542	10,176	56.3	15,246	84
40-44	15,880	352	8,463	53.2	13,654	86
45-49	13,166	277	7,259	55	11,531	87.5
50-54	11,608	250	6,630	57	10,131	87
55-59	10,116	207	13,336	131	8,754	86.5
60-	1,864	17	2,170	116	1,051	56
61+	9,070	1	431	4.7	780	8.5
Overall	116,035	5,653	70,900	61	90,839	78



Table B2: Population coverage of smear tests in the Irish Cervical Screening Programme in the year 2006

Age (Years)	Number Resident Eligible Women (a)	Number Resident Women with at least one smear				Overall (b)	% Smear Coverage 100* b/a
		In the year 2006	In the last 5 years 01/01/2002 and 31/12/2006		Invitation Status unknown		
			Personally invited	Not Personally invited			
<20	-	107	1	569	-		
20-24	0	927	111	3,745		-	
25-29	11,892	3,393	9,472	7,043		8,804	74
30-34	16,831	3,271	12,852	5,797		9,375	55.7
35-39	15,236	3,001	10,176	5,309		9,055	59.43
40-44	13,645	2,854	8,463	4,373		8,469	62.07
45-49	11,525	2,387	7,259	3,668		7,178	62.28
50-54	10,128	2,005	6,630	2,926		6,129	60.52
55-59	8,751	1,499	13,336	1,744		5,513	63
60-	884	209	2,170	228		776	87.78
61+	-	625	431	1,158		-	-
Overall	88,892	20,278	70,901	36,560		55,299	62.2

Note:

- Coverage refers to a cumulative measure of the number of eligible women (25-60 years) who have undergone smear testing over the screening interval and provides information on the relative extent to which the ICSP is reaching its target population.
- Coverage of women in ICSP Phase One from January 2002 – December 2006 is defined as the number of women who have had a smear within the last five years expressed as a percentage of the eligible women from the population register.
- The proportion of the target population screened in intervals is the main determinant of success of a screening programme.



Table B3: Results of all smears taken in the Irish Cervical Screening Programme in the year 2006

Age (Years)	Cytological Diagnosis								Overall
	Malignant tumour cells	High grade intraepithelial lesion (HSIL)	Low grade intraepithelial lesion (LSIL)	ASC-H	ASC-US	Atypical glandular cells (AGC)	Negative for intraepithelial lesions	Unsatisfactory	
<20		2	16	N/A	10		73	14	115
20-24		40	125		65	1	649	44	925
25-29		223	300		190	5	2,732	162	3,613
30-34	2	166	191		149	5	2,771	161	3,449
35-39	1	101	117		117	2	2,624	116	3,081
40-44	3	75	79		109	2	2,548	141	2,960
45-49	5	43	60		80	7	2,139	99	2,434
50-54	2	13	41		40	5	1,839	115	2,060
55-59		6	13		18	1	1,376	102	1,517
60-	1	1	1		1		186	16	206
61+	2	4	2		8	2	580	37	635
Overall	16	674	945		787	30	17,517	1,007	20,995

Note:

- This table only reports one result per smear, the most severe.
- The EU cytology terminology is the Bethesda classification.
- A translation table of *CIN* or *NHSCSP* and *Bethesda* terminologies has been developed (see Appendix 1 *ICSP Cytology Terminology Translation Table*) to reflect the ICSP results.

Table B4: Number of women recommended for repeat cytology in the Irish Cervical Screening Programme in the year 2006

Age (Years)	Reason for Recommendation						Overall
	Unsatisfactory	Low Grade SIL	ASC-US	AGC	ASC-H	Other(*) broken	
<20	14	11	10	0	N/A	0	35
20-24	47	83	58	0		1	189
25-29	166	191	143	1		1	502
30-34	154	89	118	3		5	369
35-39	115	59	95	2		3	274
40-44	133	45	84	2		4	268
45-49	98	29	64	3		2	196
50-54	112	27	32	2		5	178
55-59	100	6	17	0		1	124
60-	13	1	1	0		0	15
61+	43	1	9	2		0	55
Overall	995	542	631	15		22	2,205

Note:

- Only the women referred for repeat cytology among those screened are included. Each woman is included only once.



Table B5: Number of women referred to colposcopy in the Irish Cervical Screening Programme in the year 2006

Age (Years)	Reason for Referral							Overall
	Invasive Cancer Cytology	High Grade SIL	Low Grade SIL	ASC-US & ASC-H	AGC & AGUS	Negative /NAD	Unsatisfactory	
<20	0	2	5	0	0	0	0	7
20-24	0	32	28	4	1	1	1	67
25-29	0	123	60	17	3	6	9	218
30-34	1	92	52	14	1	6	5	171
35-39	0	52	34	12	0	3	4	105
40-44	2	35	23	12	0	1	9	82
45-49	3	21	14	9	2	1	4	54
50-54	2	7	7	2	2	9	3	32
55-59	0	3	2	2	1	3	7	18
60-	1	1	0	0	0	0	1	3
61+	2	4	1	0	0	1	0	8
Overall	11	372	226	72	10	31	43	765

Note:

- Data reflects the number of women referred for colposcopy among those screened and includes referrals arising either from first or from repeat (follow-up) cytology.
- Each woman is counted only once.

Table B6: Compliance to colposcopy in the Irish Cervical Screening Programme in the year 2006

Reason for Referral (cytology)	Number Referred Women	Colposcopy Done In referral centres(a)	Colposcopy Not Done
Malignant tumour cells	11	7	4
HSIL	372	286	86
LSIL	226	149	77
ASC-H /ASC-US	72	51	21
AGC / AGUS	10	7	3
Negative suspicious cx	31	8	23
3 Unsatisfactory	43	32	11
Total	765	540	225

Note:

- Data reflects the number of individual women screened in 2006 who were referred and attended for colposcopy at the Mid Western Colposcopy Clinic in Limerick.

Table B7: Cytological and histological results of women who had colposcopy in the Irish Cervical Screening Programme in the year 2006

Cytology	Histology									
	Invasive Cancer	Adeno Ca in situ (CGIN)	CIN 3	CIN 2	CIN 1	Unsatisfactory	No CIN/ GIN or Cancer	Biopsy not performed	Unknown	Overall
Malignant tumour cells	0	0	2	0	0	0	1	4	0	7
HSIL	1	1	106	61	44	0	16	52	5	286
LSIL	0	0	4	16	44	0	4	69	12	149
ASCH/ASC-US	0	0	2	1	14	0	2	29	3	51
AGC / AGUS	0	0	2	1	2	0	0	2	0	7
Negative	0	0	0	0	1	0	0	6	1	8
Unsatisfactory	0	0	0	1	5	0	2	22	2	32
Total	1	1	116	80	110	0	25	184	23	540

Note:

- Only women who were screened in 2006 and who underwent a colposcopy are considered.
- It reflects only one observation per woman who underwent colposcopy, even if she underwent more than one (or more than one biopsy).
- The most severe histological finding is correlated within a year from the cytology result that caused referral to the colposcopy service.



Table B8: Women with histologically confirmed CIN or invasive cancer by age group in the Irish Cervical Screening Programme in the year 2006

Age (Years)	Histological Diagnosis			Unstaged Invasive Squamous Ca	Invasive AdenoCa	Other Invasive Ca	AdenoCa IN situ (CGIN)	CIN3	CIN2	CIN1	Overall
	Fully Invasive Squamous Ca	Micro Invasive Squamous Ca									
20-24	0				0	0	0	5	7	5	17
25-29	0				0	0	0	39	40	43	122
30-34	1				0	0	0	32	13	16	62
35-39	0				0	0	1	17	10	20	48
40-44	0				0	0	0	11	6	12	29
45-49	0				0	0	0	8	2	12	22
50-54	2				0	0	0	2	1	0	3
55-59	0				0	0	0	0	1	1	2
60-	0				0	0	0	0	0	0	0
61+	0				0	0	0	2	0	1	3
Overall	3				0	0	1	116	80	110	308

Note:

- Data shows the number of women with histologically confirmed CIN or invasive cancer among those screened and includes only one observation per woman even if she underwent more than one colposcopy (or more than one biopsy).
- For CIN1, CIN2 and CIN3 column totals are expected to be the same as in Table B7.
- Table B8 measures those records from Table B7 which relate to histologically confirmed CIN and invasive cancers only.
- To qualify for the report the records must also relate to cytological and histological results of women who attended colposcopy in the reporting period. It shows the volume of women who attended for colposcopy after receiving a management recommendation of R7 in their cytology within the reporting period.

Table B9: Treatment performed for CIN/Invasive Cancer in the Irish Cervical Screening Programme in the year 2006

Treatment	Histology Reflects the most severe histology before treatment.						
	No Biopsy (See and treat)	CIN1	CIN2	CIN3	Adeno ca in situ (CGIN)	Invasive Cancer	Overall
Excision by radio-frequency device (loop, needle, including conisation)	0	5	8	30	0	0	43
Cold knife conisation	15	100	70	81	1	1	268
Type of treatment unknown (2)	134	0	1	3	0	0	138
Treatment unknown (4)	35	5	1	2	0	0	43
Overall	184	110	80	116	1	1	492

Note:

- Table B9 measures colposcopy treatments performed for all records from Table B8 and relates to cytological and histological results of women who attended colposcopy in the reporting period.
- It shows the number of women who attended for colposcopy after a referral from their smear test result within the reporting period.



Table B10: Cytological follow-up of women treated for CIN 2/3 in the Irish Cervical Screening Programme in the year 2006

Treatment Performed	Interval from treatment $\geq$ 6 months			Interval from treatment <6 months
	Cytology=no SIL	Cytology= SIL	Cytology not available	
Excision by radio-frequency device (loop, needle, including conisation)	10	0	15	13
Cold knife conisation	23	4	84	41
Treatment unknown	0	0	2	2
No treatment	1	0	2	0
Overall	34	4	103	56

Note:

- Data reflects women treated for CIN2 or CIN 3 or AdenoCa in situ according to the previous table.
- The first control after treatment (usually after 6 months) is considered.
- Table B10 measures cytological and colposcopy follow up of women treated for CIN2/3 as counted in Table B7.
- To qualify for the report the records include cytological and histological results of women who attended colposcopy in the reporting period.

# Appendix



# Appendix

Cytology Terminology Translation Table Lab/F/006 rev A

ICSP Cytology Terminology Translation Table				
For Office Use	CIN Terminology	Bethesda Terminology	For Office Use	Management Recommendation
P1	Unsatisfactory / Inadequate	Unsatisfactory / Inadequate	R6	Repeat smear in 1-3 months
			R7	Refer to Colposcopy after 3 consecutive unsatisfactory
			R7	Refer to Colposcopy - if single unsatisfactory / inadequate after having treatment
P2	Negative / NAD	Negative / NAD	R1	No further screening required
			R2	Normal recall (every 3 years 25 - 44 and every 5 years 45 - 60)
			R3	Repeat smear in 12 months (history available)
			R4	Repeat smear in 6 months if first smear negative after having treatment of a high grade lesion
			R7	Refer to Colposcopy opinion if suspicious cervix
P3	Borderline Nuclear Abnormalities (Squamous) or HPV	ASC - US	R4	Repeat smear in 6 months
		ASC - H	R7	Refer to Colposcopy after 3 consecutive BNA (sq), ASC-US, or a single ASC-H, BNA-H
P4	Mild Dyskaryosis	Low Grade LSIL	R4	Repeat smear in 6 months
			R7	Refer to Colposcopy after 2 consecutive mild dyskaryosis
			R7	Refer to Colposcopy - single mild dyskaryosis / LSIL after treatment in Colposcopy
			R7	Refer to Colposcopy - 3 untreated mild dyskaryosis / LSIL in 10 years
P5	Moderate Dyskaryosis	High Grade HSIL	R7	Refer to Colposcopy
P6	Severe Dyskaryosis	High Grade HSIL	R7	Refer to Colposcopy
P7	Query Squamous Cell Carcinoma	Query Squamous Cell Carcinoma	R7	Refer to Colposcopy
			R8	Refer to Specialist gynaecology opinion
P8	Borderline Nuclear Abnormalities (Glandular)	AGUS / AGC	R5	Repeat smear in 3 months
		AGH	R7	Refer to Colposcopy after 2 consecutive BNA (gl), AGUS / AGC, or single AGH
P9	Query Glandular Neoplasia AIS/GIN	Query Glandular Neoplasia AIS/Adenocarcinoma	R7	Refer to Colposcopy
			R8	Refer to Specialist gynaecology opinion
P10	Broken or Damaged Slides	Broken or Damaged Slides	R6	Repeat smear in 1 - 3 months

## Glossary

Atypical Squamous Cells of Undetermined Significance (ASC-US)  
 Atypical Endocervical Cells, Favour Neoplastic process (ASC-H)  
 Atypical Glandular Cells of Undetermined Significance (AGUS)  
 Atypical Glandular Cells (AGC)

Atypical Glandular Cells, Favour Neoplastic process (AGH)  
 Adenocarcinoma In Situ (AIS)  
 Borderline Nuclear Abnormalities Highgrade (BNA-H)  
 Glandular Intraepithelial Neoplasia (GIN)

Low Grade Squamous Intraepithelial Lesion (LSIL)  
 High Grade Squamous Intraepithelial Lesion (HSIL)





If you have any queries about the  
Cervical Screening Programme contact:

Information Line  
1800 25 2 60 0

[www.icsp.ie](http://www.icsp.ie)



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