

Trinity College Dublin

The MAMMI Study MH Strand

Maternal health And Maternal Morbidity in Ireland

**Depression and anxiety in primiparous women before
and during early pregnancy**

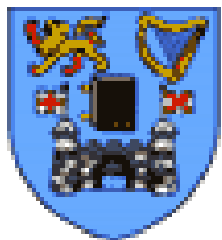
**International Confederation of Midwives Congress
Prague 2014**

Margaret Carroll

Associate Professor in Midwifery/Research Assistant, Trinity College Dublin

Principal Investigators

Professor Cecily Begley, TCD and Professor Mike Clarke, QUB (Adjunct Professor TCD)

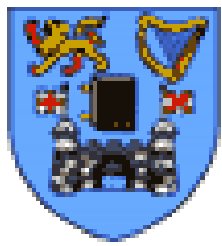


Trinity College Dublin

The MAMMI Study MH Strand

Sincerest thanks to

- **The women** (all women including those who are not taking part but who read the information)
- My colleagues **Deirdre Daly, Deirdre O'Malley, Francesca Wuytack, Sunita Panda, Louise Rafferty**
- **Rebekah Maguire** and **Sophie Clare** who worked with us on the MAMMI study in summer 2012
- The **Health Research Board (HRB)** for funding a number of projects on the MAMMI study
- **Professor Stephanie Brown**, Murdoch Children's Research Institute Australia for granting permission to use and modify surveys



Trinity College Dublin

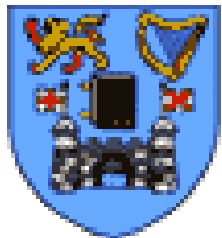
The MAMMI Study MH Strand

A special thanks to

- The **midwives** and **midwifery students**
- The **IT Midwives**
- The **medical records staff**

Administrative and other **colleagues** who are supporting the MAMMI study





Trinity College Dublin

The MAMMI Study MH Strand

Maternal health And Maternal Morbidity in Ireland

MRC Hubs for Trials
Methodology Research

All-Ireland Hub

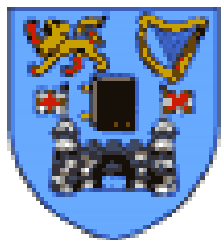
This presentation will focus on

Depression and anxiety in primiparous women before and during early pregnancy

(Data from women enrolled up to April 2014, n=1215 and from the antenatal survey)

The presentation will include

- Overview of study methodology
- Aim and objectives of the MAMMI Study MH Strand
- Prevalence of depression and anxiety before and during early pregnancy
- *Key take home message*



Trinity College Dublin

Mixed methods design

The MAMMI Study

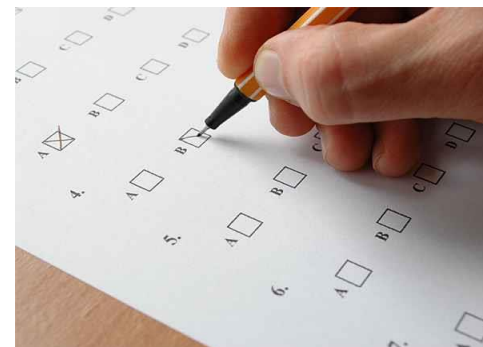
A cohort study with 2,000 first-time mothers: public, private, semi-private – survey.

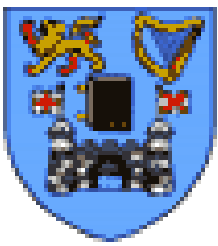
Women are **recruited at the booking visit** in two large maternity hospitals

(1600 from 1st site and

400 from 2nd site)

(600 from 3rd site commencing 09/2014)





Mixed methods design



The MAMMI Study

Trinity College Dublin

Study No

Study No

Study No

Study No

Study No

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet One: Antenatal 1

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me on 01 88888888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

Please tick here if you do NOT wish to complete this or future surveys ☐

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Two: 3 Months Postnatal 2

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me on 01 88888888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

If you do not want to complete this or future surveys please tick ☐

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Three: 6 Months Postnatal 3

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me on 01 88888888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

Please tick here if you do not want to complete this or receive future surveys ☐

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Four: 9 Months Postnatal 4

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me on 01 88888888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

Please tick here if you do not want to complete this or receive future surveys ☐

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Five: Twelve Months Postnatal 5

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me on 01 88888888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

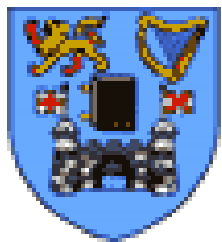
Survey 1
Antenatal
First booking visit

Survey 2
3 months
postpartum

Survey 3
6 months
postpartum

Survey 4
9 months
postpartum

Survey 5
12 months
postpartum



Mixed methods design

Trinity College Dublin

Study No

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet One: Antenatal 1

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call 01 854 8888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

Please tick here if you do NOT wish to complete this or future surveys ☐

Study No

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Two: 3 Months Postnatal 2

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me - Deirdre Daly on 01 854 8888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

If you do not want to complete this or future surveys please tick ☐

Study No

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Three: 6 Months Postnatal 3

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me - Deirdre Daly on 01 854 8888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

Please tick here if you do not want to complete this or receive future survey ☐

Study No

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Four: 9 Months Postnatal 4

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me - Deirdre Daly on 01 854 8888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

Please tick here if you do not want to complete this or receive future surveys ☐

Study No

The MAMMI study

Maternal health And Maternal Morbidity in Ireland

A research study of 1600 first-time mothers' health during pregnancy and after giving birth.

Survey Booklet Five: Twelve Months Postnatal 5

Thank you for taking the time to complete this survey. It will take you about 30 minutes to complete it and your answers are **confidential**. If you have any questions at all, or need help answering any of the questions, please feel free to call me - Deirdre Daly on 01 854 8888.

The MAMMI survey has been approved by the Research Ethics Committees of the Rotunda Hospital and the Faculty of Health Sciences, Trinity College Dublin.

Survey 1
Antenatal
First booking visit

Survey 2
3 months
postpartum

Survey 3
6 months
postpartum

Survey 4
9 months
postpartum

Survey 5
12 months
postpartum

Data
collection
from
women's
records

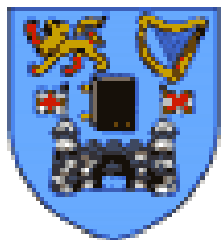


Interviews
with women
experiencing
a morbidity



To ascertain
health service
and self-help
seeking
behaviour

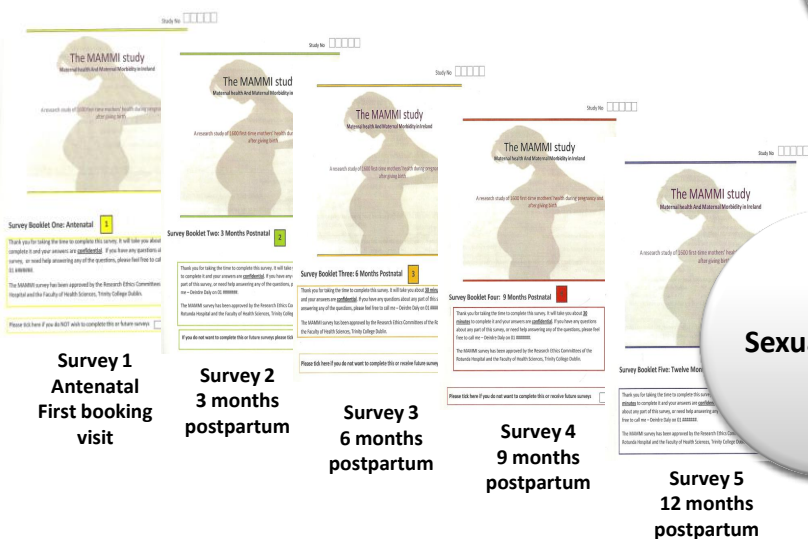
Identify factors
amenable to
modification and
trialling in future
studies



The MAMMI Study

Trinity College Dublin

Each of the surveys asks women about...



Survey 1
Antenatal
First booking visit

Survey 2
3 months
postpartum

Survey 3
6 months
postpartum

Survey 4
9 months
postpartum

Survey 5
12 months
postpartum

Sexual health

**Faecal
incontinence**

**Urinary
incontinence**

Pain

**One-to-one interviews with women
experiencing a morbidity
(n=20-30)**

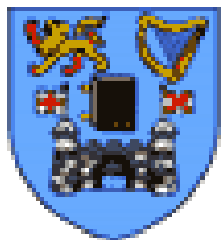
**Data collection from women's
records**

**2000 primiparous women
(A/N, 3, 6, 9 and 12 months
postpartum)**

**Intimate
partner
violence**

**General
health**

**Mental
health**

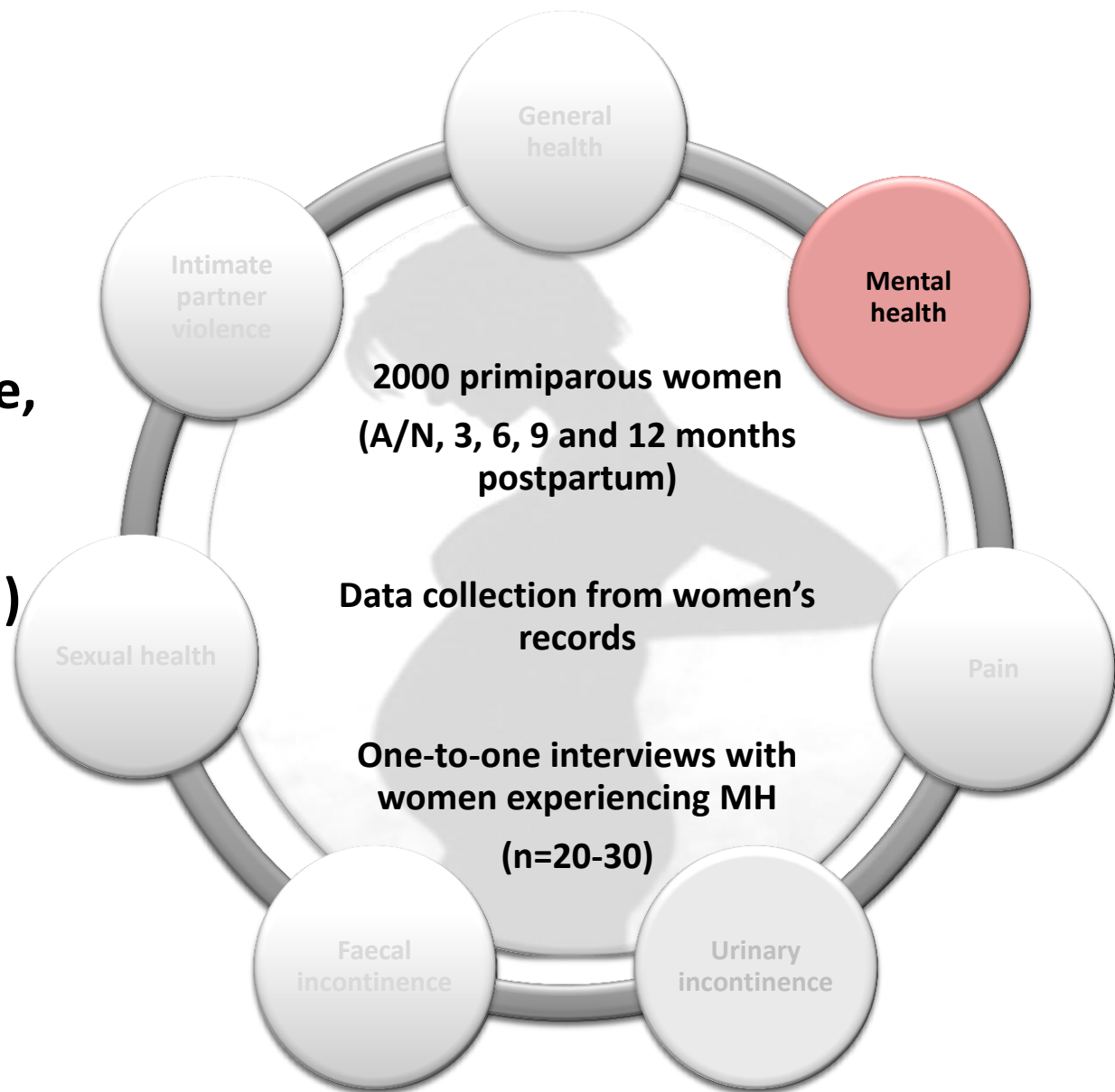


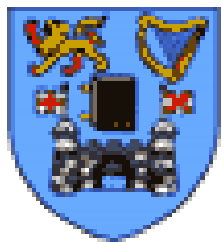
Trinity College Dublin

The MAMMI Study MH Strand

Aim:

To identify the existence, extent, prevalence and associated risk factors for mental distress (MH) in 2000 primiparous women before, during and in the 12 months after pregnancy.

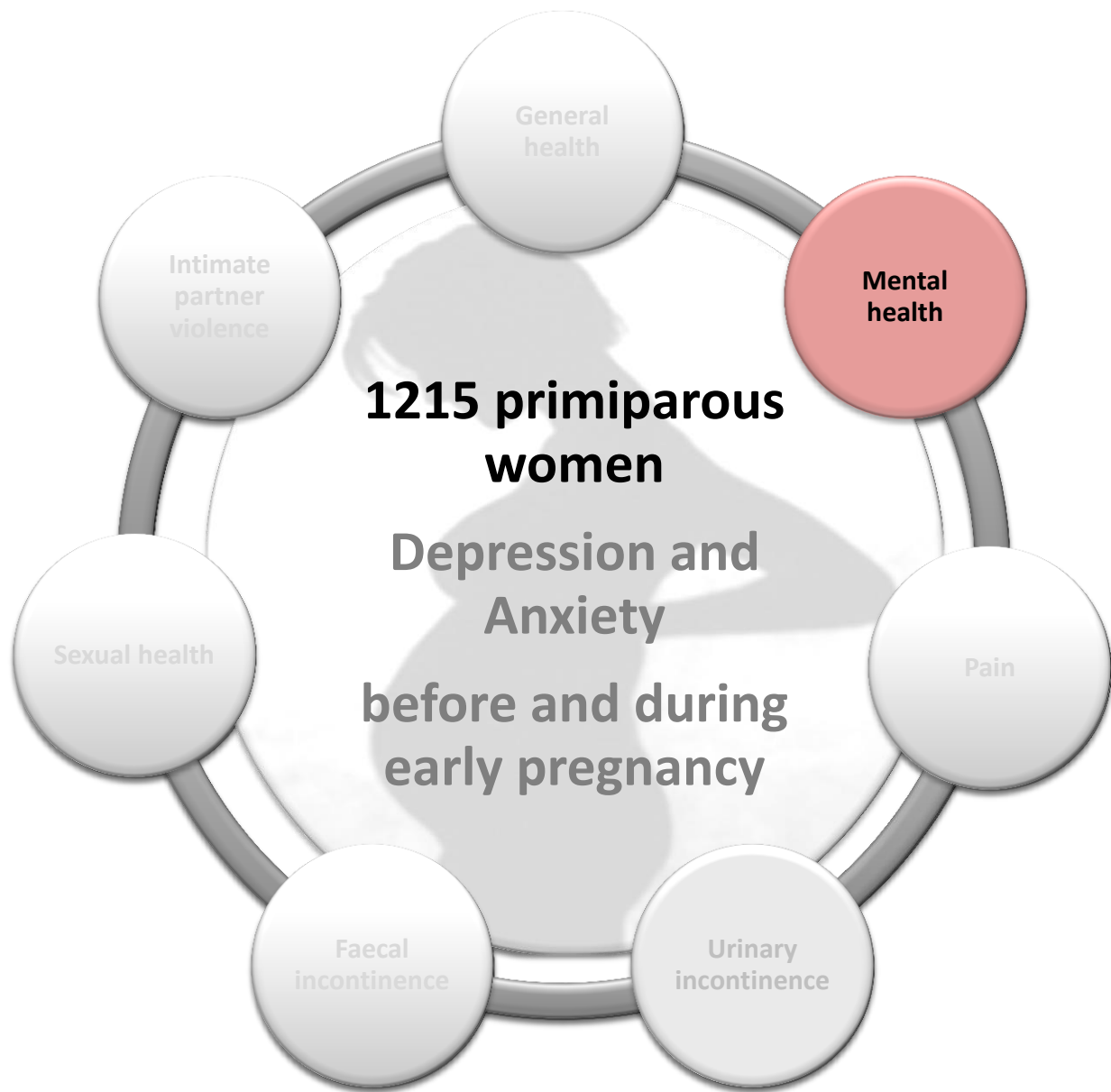


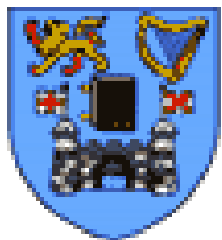


Trinity College Dublin

The MAMMI Study MH Strand

**Today's presentation
focuses on the
prevalence of
depression and
anxiety (MH) before
and during early
pregnancy**



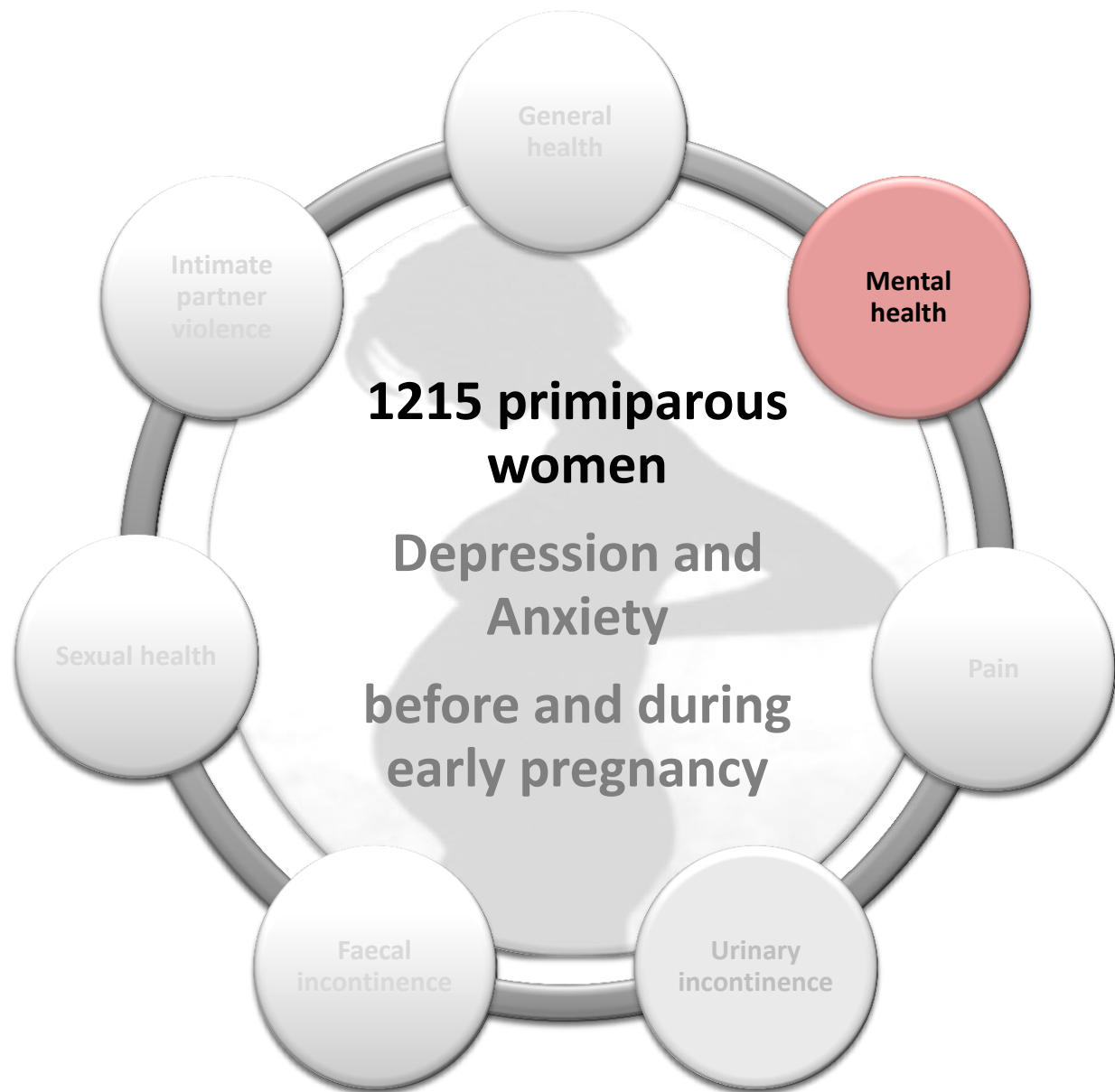


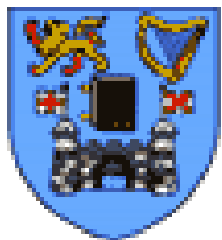
Trinity College Dublin

The MAMMI Study MH Strand

**Today's presentation
focuses on the
prevalence of
depression and
anxiety (MH) before
and during early
pregnancy**

1. Anytime before pregnancy
2. In the 12 months before pregnancy
3. In early pregnancy
4. DASS-21





Definition – Depression and Anxiety

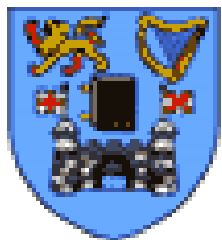
Trinity College Dublin

- **Depression**
 - Feeling depressed, low mood or sad (lasting two weeks or more)
 - As measured using the DASS (Depression Anxiety Stress Scales (DASS-21))
- **Anxiety**
 - Intense anxiety (such as panic attacks)
 - As measured using the DASS (Depression Anxiety Stress Scales (DASS-21))

Depression, Anxiety and Stress Scales

DASS-21

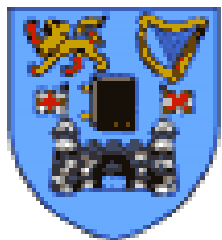
- DASS consists of 3 self-reported scales that measure mental distress in relation to depression, anxiety and stress
- Can discriminate between depression, anxiety and stress
- DASS-21 is a shortened version of the full 42 itemed DASS
- Each scale (depression, anxiety and stress) contains 7 items, is rated on a 4 point likert scale, and is about emotional states in the past week



Trinity College Dublin

The MAMMI study

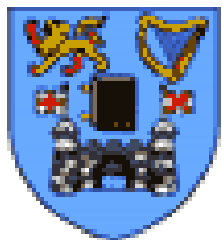
- **Preliminary data**
 - 40% of primiparous women are being offered information on the MAMMI study
 - Of those given the information, just under two in five complete the survey
 - Response rate (37%)



Nationality (n=1215)

Trinity College Dublin

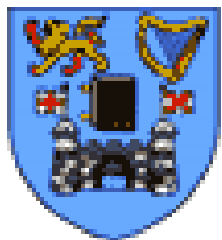
Nationality	The MAMMI Study		Site hospital 2012 (n = 9116) (all women)	
	n	%	n	%
Irish	786	64.5	5957	65.4
EU	312	25.7	1929	21.2
Non-EU	98	8.1	1217	13.3
Not stated	21	1.7	13	0.1



Age groups (n=1215)

Trinity College Dublin

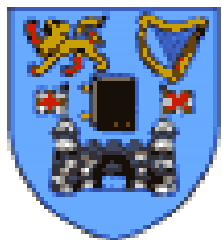
Age group	The MAMMI Study		Site hospital 2012 (n=3928) _(primiparae)	
	n	%	n	%
18 to 24	104	8.6	872	22.2
25 to 29	297	24.5	1031	26.2
30 to 34	502	41.4	1307	33.3
35 to 39	268	22.1	577	14.7
40 and over	42	3.5	141	3.6



Age groups (n=1215)

Trinity College Dublin

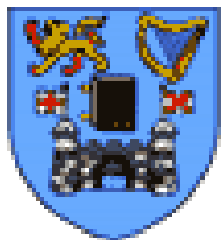
Age group	The MAMMI Study		Site hospital 2012 (n=3928) _(primiparae)	
	n	%	n	%
18 to 24	104	8.6	872	22.2
25 to 29	297	24.5	1031	26.2
30 to 34	502	41.4	1307	33.3
35 to 39	268	22.1	577	14.7
40 and over	42	3.5	141	3.6



BMI categories (n=1114)

Trinity College Dublin

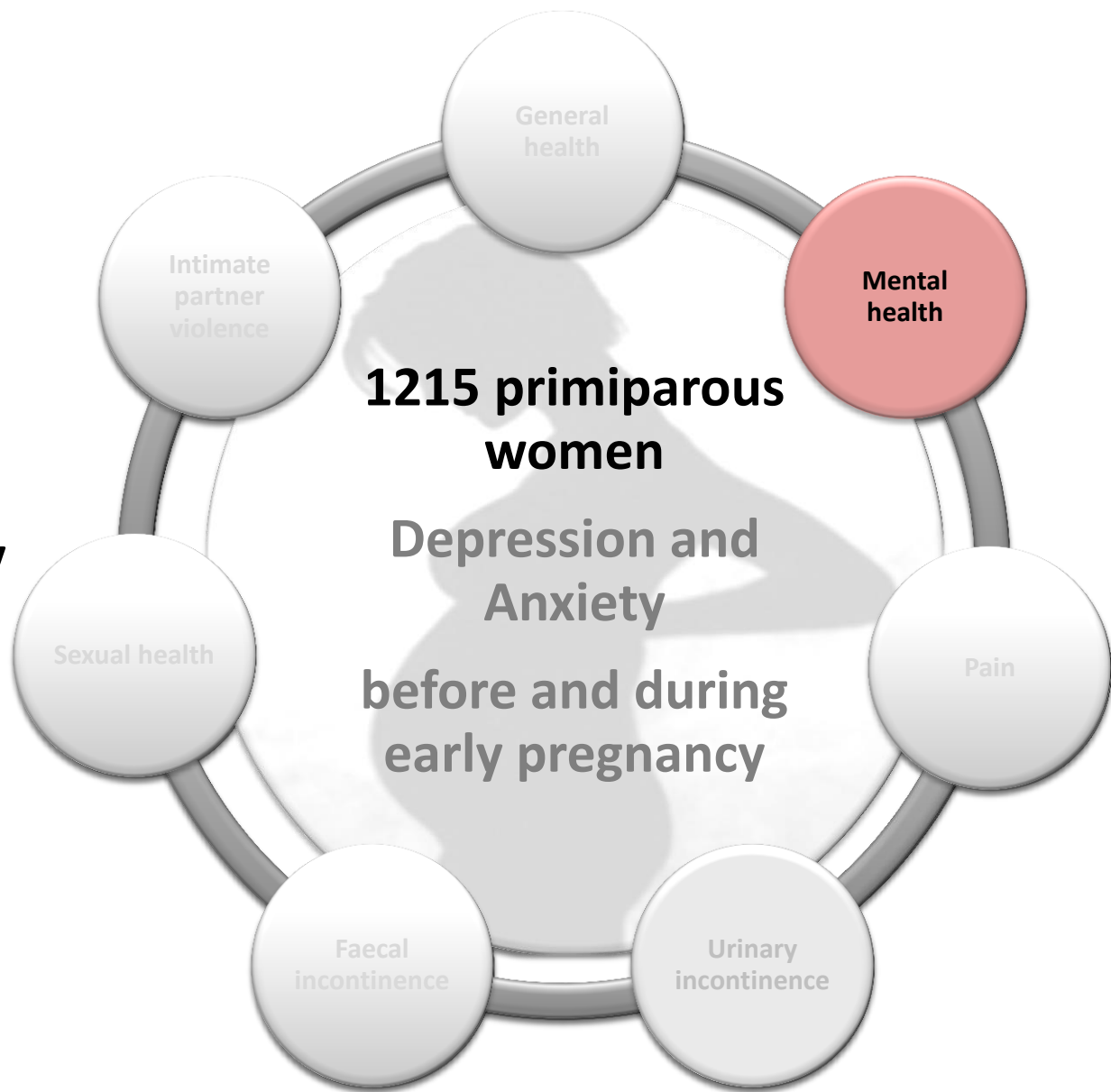
BMI categories		The MAMMI Study		Site hospital	
BMI	n	%	n	%	
Underweight (≤ 18.49)	68	6.1	Not reported		
Ideal (18.5-24.9)	746	67.0			
Overweight (25-29.9)	193	17.3			
Obese (30-34.9)	88	7.9			
Very obese (≥ 35)	19	1.7			



The MAMMI Study MH Strand

Trinity College Dublin

**Prevalence of
depression
before & during early
pregnancy**



Depression before pregnancy (anytime)

	Anytime before pregnancy	
	n = 1210	%
Never	828	68.4
Rarely / Occasionally	353	29.2
Often	29	2.4

Depression before pregnancy (12 months)

	Anytime before pregnancy		12 months before pregnancy	
	n = 1210	%	n = 1207	%
Never	828	68.4	938	77.2
Rarely / Occasionally	353	29.2	242	20.2
Often	29	2.4	27	2.2

Depression during early pregnancy

	Anytime before pregnancy		12 months before pregnancy		During early pregnancy	
	n = 1210	%	n = 1207	%	n = 1211	%
Never	828	68.4	938	77.2	934	77.1
Rarely / Occasionally	353	29.2	242	20.2	256	21.1
Often	29	2.4	27	2.2	21	1.7

Depression before and during early pregnancy

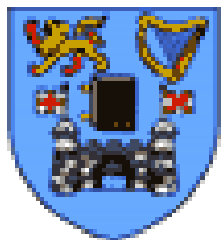
	Anytime before pregnancy		12 months before pregnancy		During early pregnancy	
	n = 1210	%	n = 1207	%	n = 1211	%
Never	828	68.4	938	77.2	934	77.1
Rarely / Occasionally	353	29.2	242	20.2	256	21.1
Often	29	2.4	27	2.2	21	1.7

Depression in early pregnancy using DASS-21

“Over the past week, ...”	During early pregnancy	
	n = 1179	%
Normal	877	74.4
Mild	102	8.7
Moderate	104	8.8
Severe	28	2.4
Extremely severe	68	5.8

Depression in early pregnancy

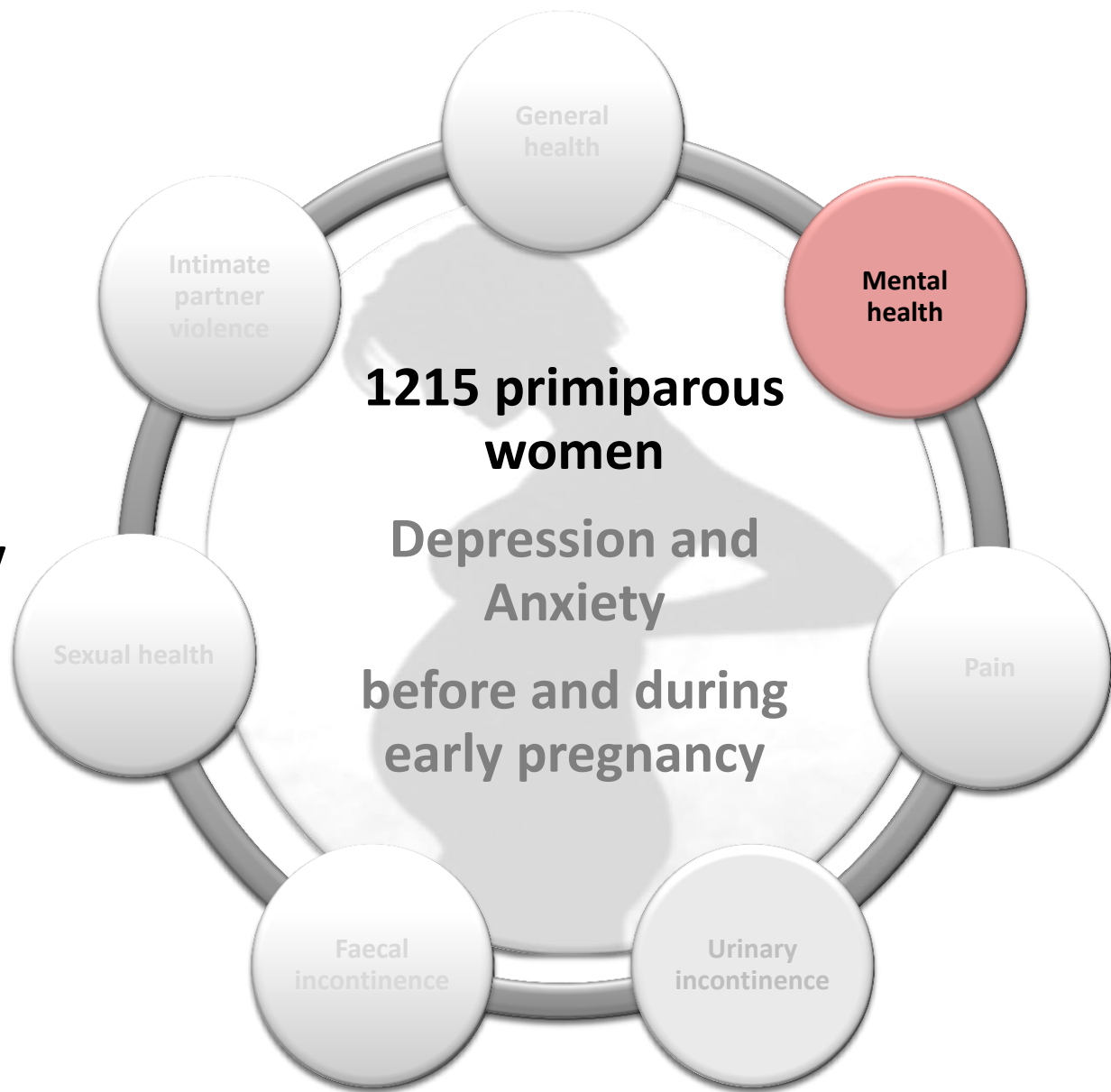
	During early pregnancy		“Over the past week, ...”	During early pregnancy	
	n = 1211	%		n = 1179	%
Never	934	77.1	Normal	877	74.4
Rarely / Occasionally	256	21.1	Mild	102	8.7
			Moderate	104	8.8
Often	21	1.7	Severe	28	2.4
			Extremely severe	68	5.8



The MAMMI Study MH Strand

Trinity College Dublin

**Prevalence of
anxiety
before & during early
pregnancy**



Anxiety before pregnancy (anytime)

	Anytime before pregnancy	
	n = 1208	%
Never	935	77.4
Rarely / Occasionally	255	21.1
Often	18	1.5

Anxiety before pregnancy (12 months)

	Anytime before pregnancy		12 months before pregnancy	
	n = 1208	%	n = 1206	%
Never	935	77.4	1032	85.6
Rarely / Occasionally	255	21.1	156	13.0
Often	18	1.5	18	1.5

Anxiety during early pregnancy

	Anytime before pregnancy		12 months before pregnancy		During early pregnancy	
	n = 1208	%	n = 1206	%	n = 1211	%
Never	935	77.4	1032	85.6	1050	86.9
Rarely / Occasionally	255	21.1	156	13.0	145	12.0
Often	18	1.5	18	1.5	13	1.1

Anxiety before and during early pregnancy

	Anytime before pregnancy		12 months before pregnancy		During early pregnancy	
	n = 1208	%	n = 1206	%	n = 1211	%
Never	935	77.4	1032	85.6	1050	86.9
Rarely / Occasionally	255	21.1	156	13.0	145	12.0
Often	18	1.5	18	1.5	13	1.1

Anxiety in early pregnancy using DASS-21

“Over the past week, ...”	During early pregnancy	
	n = 1176	%
Normal	656	55.9
Mild	202	17.2
Moderate	115	9.8
Severe	75	6.4
Extremely severe	127	10.8

Anxiety in early pregnancy

	During early pregnancy		“Over the past week, ...”	During early pregnancy	
	n = 1211	%		n = 1176	%
Never	1050	86.9	Normal	656	55.9
Rarely / Occasionally	145	12.0	Mild	202	17.2
			Moderate	115	9.8
Often	13	1.1	Severe	75	6.4
			Extremely severe	127	10.8

Depression and anxiety in early pregnancy using DASS-21

	Depression		Anxiety	
	n = 1179	%	n = 1176	%
Normal	877	74.4	656	55.9
Mild	102	8.7	202	17.2
Moderate	104	8.8	115	9.8
Severe	28	2.4	75	6.4
Extremely severe	68	5.8	127	10.8

Depression and anxiety in early pregnancy using DASS-21

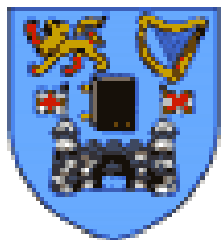
	Depression		Anxiety	
	n = 1179	%	n = 1176	%
Normal	877	74.4	656	55.9
Mild	102	8.7	202	17.2
Moderate	104	8.8	115	9.8
Severe	28	2.4	75	6.4
Extremely severe	68	5.8	127	10.8

Depression and anxiety in early pregnancy using DASS-21

	Depression		Anxiety	
	n = 1179	%	n = 1176	%
Normal	877	74.4	656	55.9
Mild	102	8.7	202	17.2
Moderate	104	8.8	115	9.8
Severe	28	2.4	75	6.4
Extremely severe	68	5.8	127	10.8

25.7%

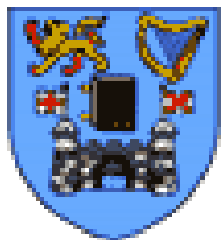
44.2%



Trinity College Dublin

This information is important because...

- Depression is common in pregnancy
- But anxiety is the most common mental health disorder and while it can co-exist with depression it also can exist in isolation from depression
- Anxiety is often thought of as being the same as / part of depression
- But women can be experiencing the distress of anxiety without experiencing depression.



Trinity College Dublin

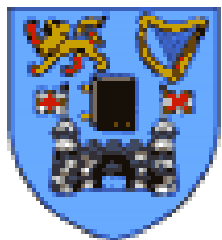
MRC

Hubs for Trials
Methodology Research

All-Ireland Hub

Conclusion and key message

**If we only ask women about depression, we
may miss women who experience the
distress of anxiety**

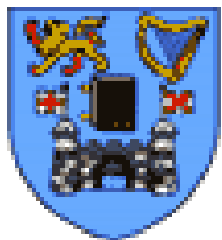


Trinity College Dublin

The MAMMI Study MH Strand

- **Future work**
- **The MAMMI study** is ongoing
 - Sample size is 2,600 over three hospital sites
(3rd site commencing in September 2014 - Research Ethics Committee approval granted)
- Detailed analyses are required before data are truly understood and statistical significance and associations are ascertained
 - Only then can modifiable factors be identified

<http://www.mammi.ie/>



Trinity College Dublin

The MAMMI Study MH Strand

Thank you

Thanks to the conference organisers and scientific committee for the opportunity to present

<http://www.mammi.ie/>