

# QUALITY IMPROVEMENT RESEARCH:

## Management of premenopausal abnormal uterine bleeding at Auckland District Health Board

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Special thanks to Dr Lynn Sadler,  
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## **Aims:**

- To compare surgical hysterectomy ratios across the District Health Boards in New Zealand including age and ethnic specific data.
- To investigate factors that may contribute to the suspected disparities in hysterectomy rates between the Auckland region and other District Health Boards using the Management of Abnormal Uterine Bleeding as a model

## **Primary Hypotheses:**

- The surgical hysterectomy intervention ratio in the ADHB area is lower than the national ratio, adjusted for age and ethnicity.
- The pathway to achieving resolution for patients with abnormal uterine bleeding is unacceptably protracted due to a multitude of contributing factors.

## **Secondary Hypotheses:**

- Delay in the hospital system pathway is attributable to inadequate pre referral work up in the primary sector.
- Delay in the hospital system pathway is attributable to a long wait time between referral to first specialist appointment; excessive intra appointment intervals; and delays between surgical booking and subsequent date for surgery
- Delay in the hospital system pathway is attributable to excessive numbers of follow up appointments within the hospital clinics, and prolonged duration to resolution.
- Delay in the hospital system pathway is attributable to failure to adhere to evidence based management of abnormal uterine bleeding
- Delay in the hospital system pathway is attributable to over enthusiastic recourse to non surgical treatment modalities and/or clinician hesitancy for premature surgical management

**THE SURGICAL  
HYSTERECTOMY  
INTERVENTION RATIO IN THE  
ADHB AREA IS LOWER THAN  
THE NATIONAL RATIO,  
ADJUSTED FOR AGE AND  
ETHNICITY**

**Table 1: Hysterectomies performed by DHB of residence in the public and private sectors with age, ethnicity, and socioeconomic status adjusted hysterectomy expected rates and ratios for the time period 01 July 2009 – 30 June 2010**

District Health Board	Total Expected Public hysterectomy	Total public and private	Publically Funded	Privately Funded	% Privately performed Hysterectomy	Standardised Discharge Ratio (SDR) public only	Ratio of Total hysterectomy to Expected public
Northland	130	101	86	15	15	0.66	0.78
Waitemata	367	487	291	196	40	0.79	1.33
<b>Auckland</b>	<b>340</b>	<b>292</b>	<b>213</b>	<b>79</b>	<b>27</b>	<b>0.63</b>	<b>0.86</b>
<b>Auckland 1†</b>	<b>340</b>	<b>363</b>	<b>213</b>	<b>150</b>	<b>41</b>	<b>0.63</b>	<b>1.07</b>
<b>Auckland 2†</b>	<b>340</b>	<b>423</b>	<b>213</b>	<b>210</b>	<b>50</b>	<b>0.63</b>	<b>1.24</b>
Counties Manukau	336	405	304	101	25	0.91	1.21
Waikato	258	359	249	110	31	0.97	1.40
Lakes	82	103	84	19	18	1.02	1.26
Bay of	169	231	166	65	28	0.98	1.40
Tairāwhiti	38	60	57	3	5	1.51	1.58
Hawkes	120	124	124	No data	0	1.04	-
Taranaki	80	110	54	56	51	0.68	1.38
Mid Central	125	231	136	95	41	1.09	1.84
Whanganui	51	79	68	11	14	1.34	1.55
Capital and Coast	191	276	214	62	22	1.12	1.44
Hutt	100	180	131	49	27	1.31	1.80
Wairarapa	30	69	54	15	22	1.81	2.30
Nelson Marlborough	103	201	164	37	18	1.59	1.95
West Coast	24	49	40	9	18	1.68	2.04
Canterbury	331	715	384	331	46	1.16	2.16
South Canterbury	40	100	65	35	35	1.64	2.50
Otago	126	129	122	7	5	0.97	1.02
Southland	76	149	108	41	28	1.43	1.96

\* Data courtesy of MOH

†Auckland1 assumes private hysterectomy rate of 41%

†Auckland2 assumes private hysterectomy rate of 50%

**THE PATHWAY TO ACHIEVING  
RESOLUTION FOR PATIENTS WITH  
ABNORMAL UTERINE BLEEDING IS  
UNACCEPTABLY PROTRACTED DUE  
TO A MULTITUDE OF CONTRIBUTING  
FACTORS.**

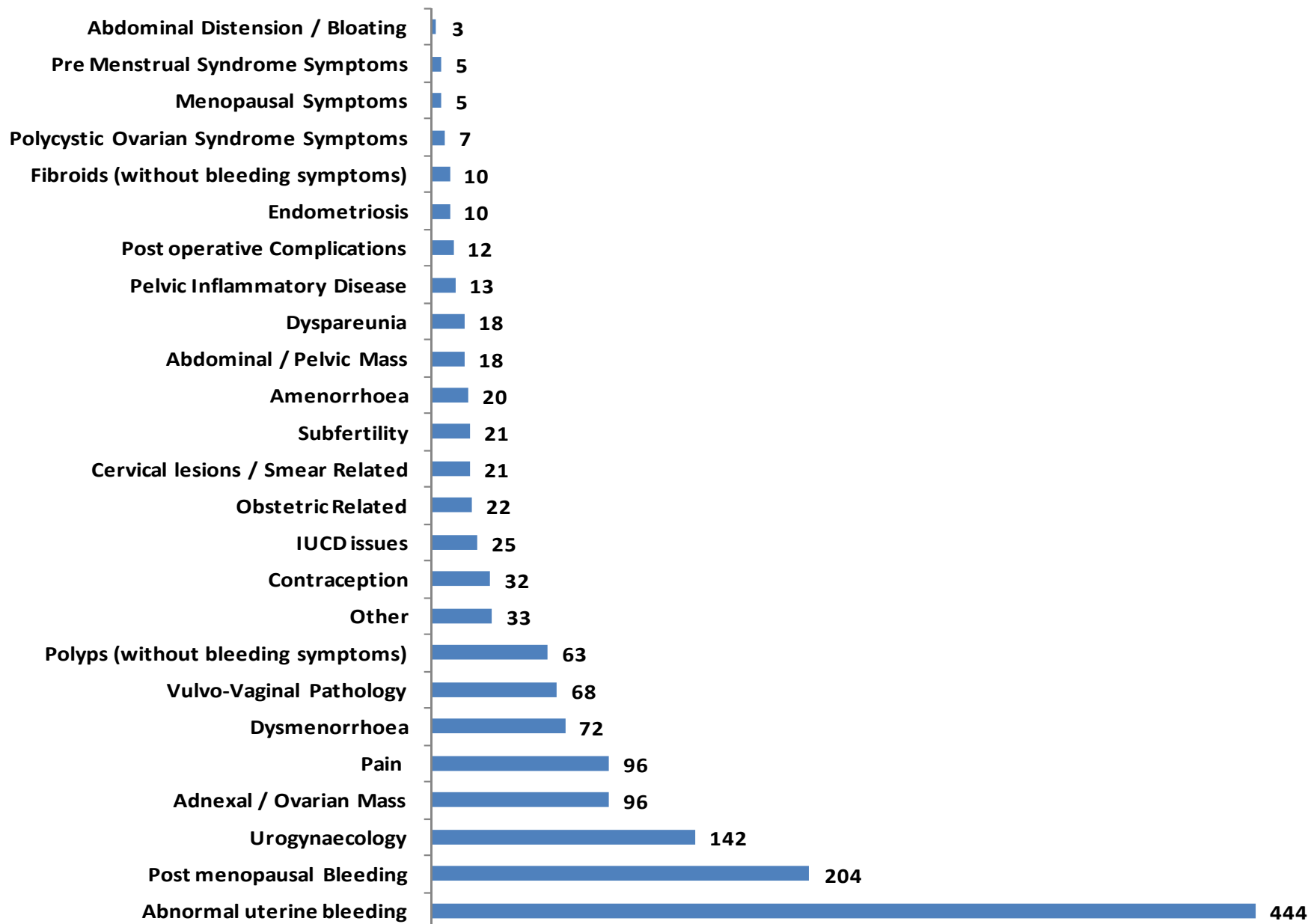
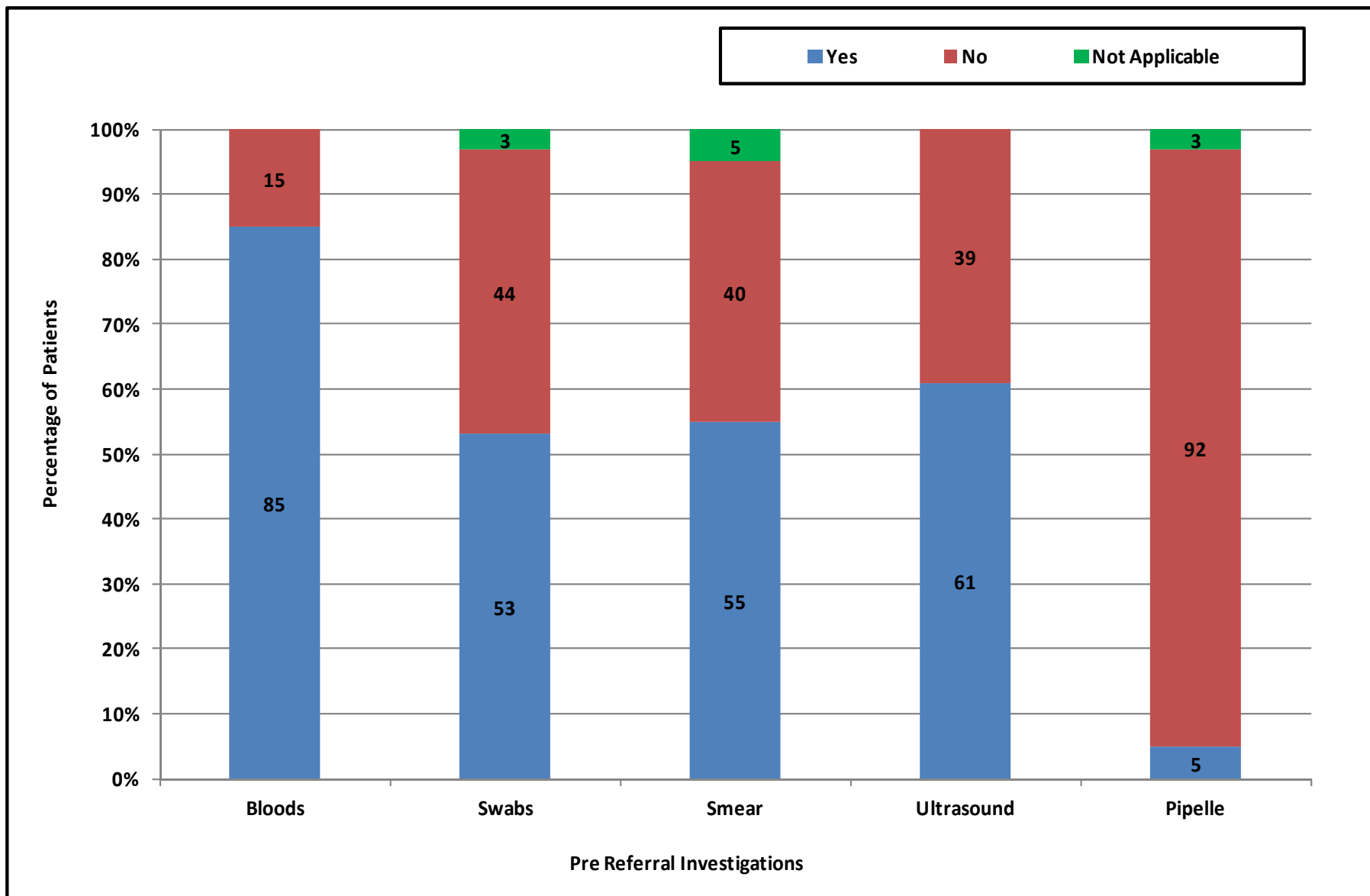


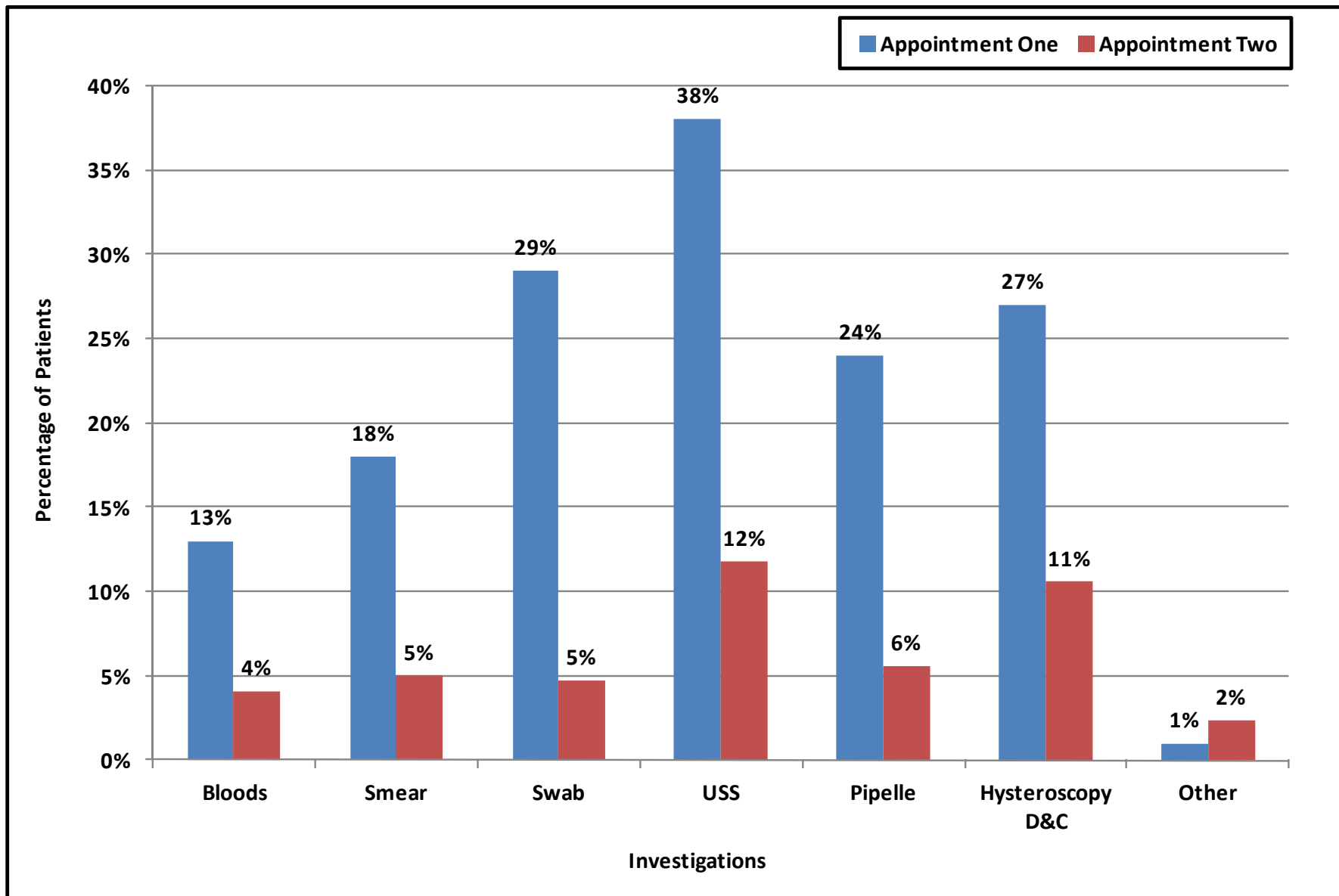
Figure 1: Referral Reason for all First Specialist Appointments to General Gynaecology and Menstrual Disorders Clinics at ADHB 01 July 2009 - 30 June 2010

**DELAY IN THE HOSPITAL  
SYSTEM PATHWAY IS  
ATTRIBUTABLE TO INADEQUATE  
PRE REFERRAL WORK UP IN THE  
PRIMARY SECTOR**



**Figure 2: Pre Referral Investigations for patients referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009- 30 June 2010**





**Figure 3: Types of Further Investigations Performed at Appointments One and Two for patients referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010**

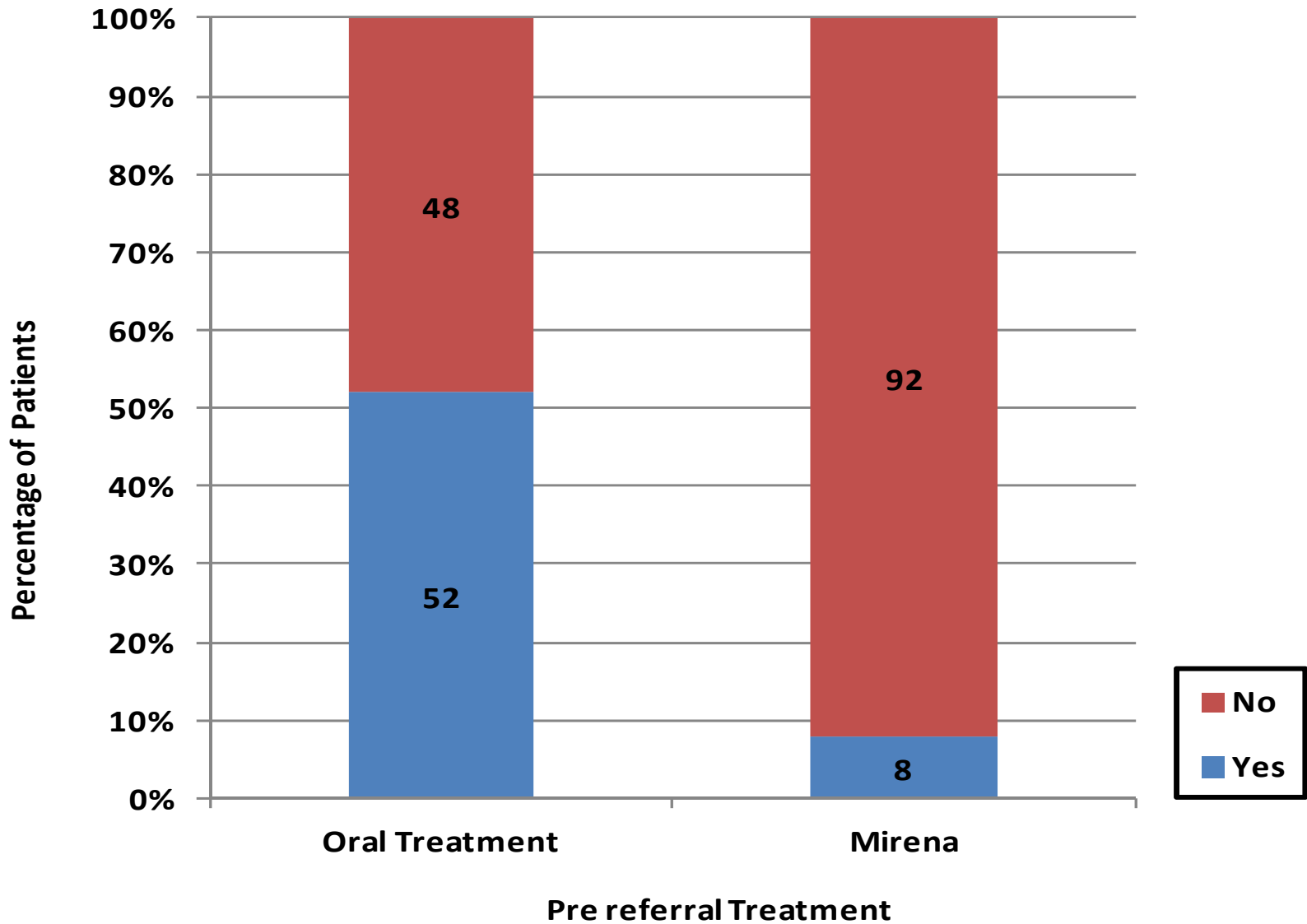
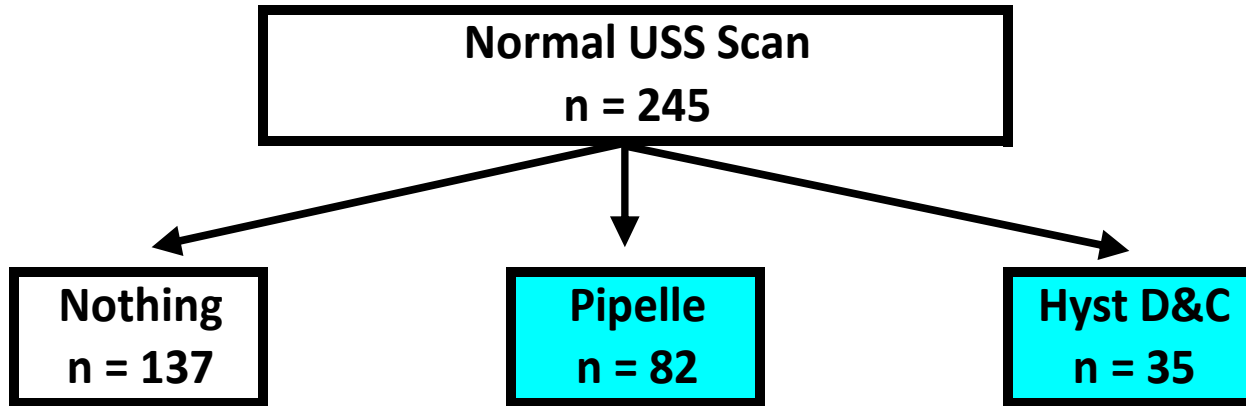


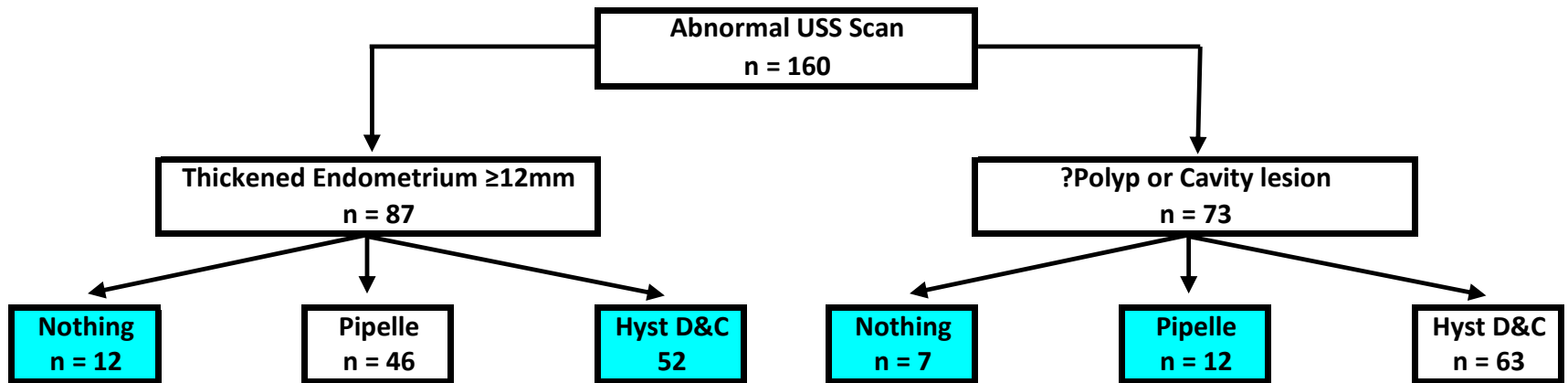
Figure 4: Treatment Options trialled prior to referral for patients referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010

**DELAY IN THE HOSPITAL  
SYSTEM PATHWAY IS  
ATTRIBUTABLE TO FAILURE TO  
ADHERE TO EVIDENCE BASED  
MANAGEMENT OF ABNORMAL  
UTERINE BLEEDING**



**NOTE: Nine Patients had both Pipelle and Hysteroscopy D&C**

**Figure 5: Endometrial Sampling in Women with a Normal Endometrium on Ultrasound Scan who were referred with Abnormal Uterine Bleeding to the General Gynaecology and Menstrual Disorders Clinics at ADHB 01 July 2009 - 30 Jun 2010**

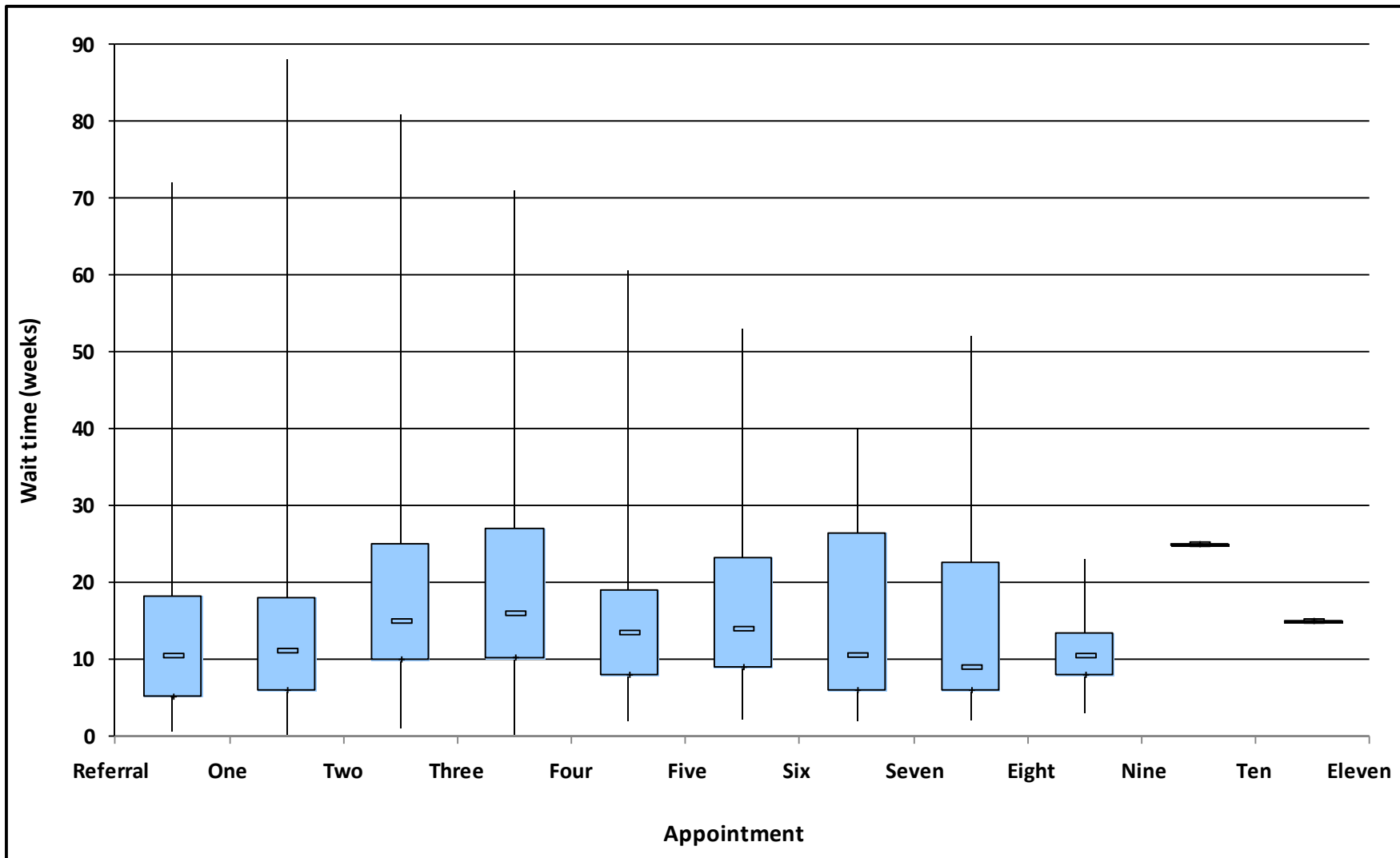


NOTE: 23 Patients had both Pipelle and Hysteroscopy D&C

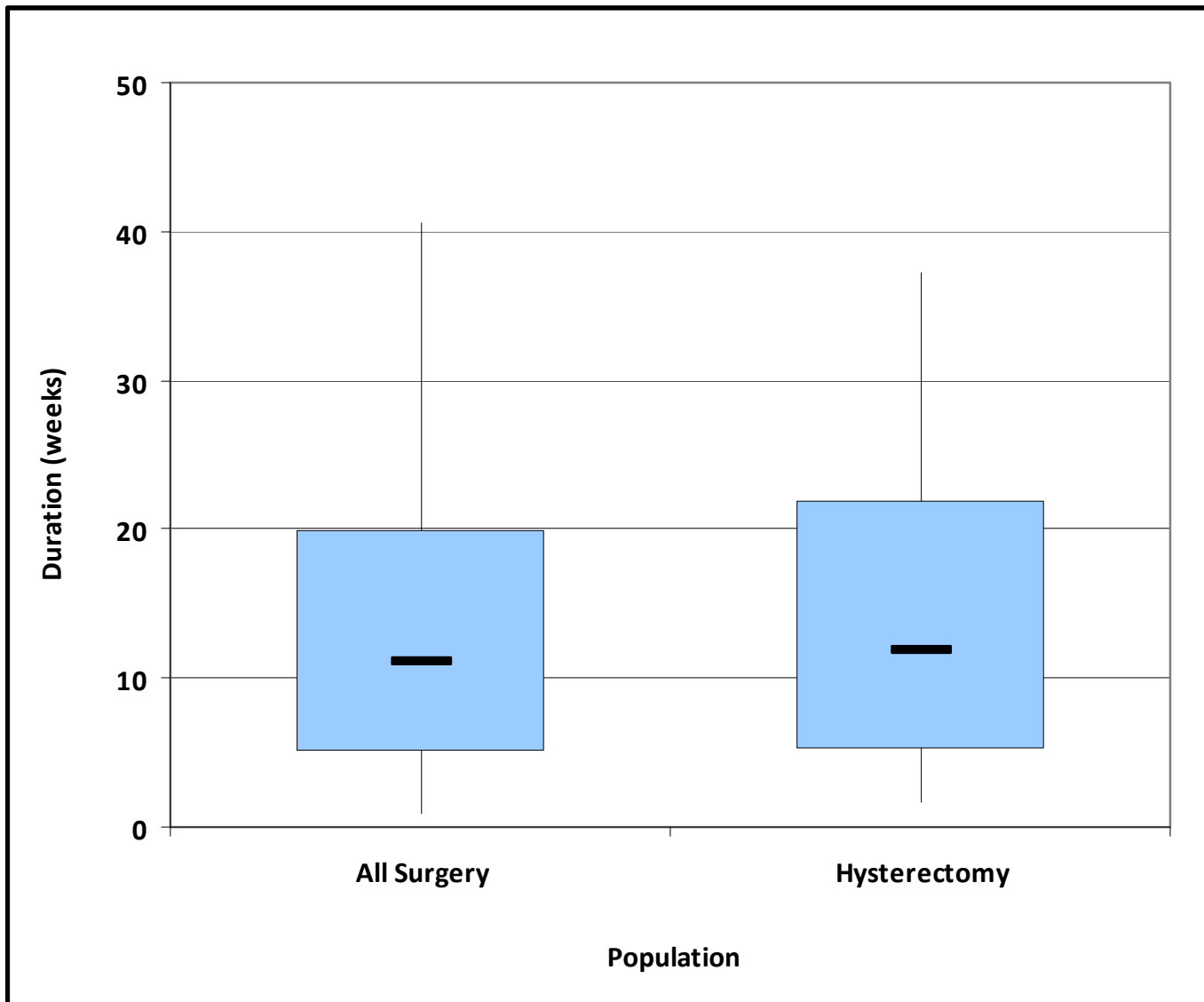
NOTE: 9 Patients had both Pipelle and Hysteroscopy D&C

**Figure 6: Endometrial Sampling in Women with an Abnormal Endometrium on Ultrasound Scan who were referred with Abnormal Uterine Bleeding to the General Gynaecology and Menstrual Disorders Clinics at ADHB 01 July 2009 - 30 June 2010**

**DELAY IN THE HOSPITAL SYSTEM  
PATHWAY IS ATTRIBUTABLE TO A  
LONG WAIT TIME BETWEEN  
REFERRAL TO FIRST SPECIALIST  
APPOINTMENT; EXCESSIVE INTRA  
APPOINTMENT INTERVALS; AND  
DELAYS BETWEEN SURGICAL  
BOOKING AND SUBSEQUENT  
DATE FOR SURGERY**



**Figure 7: Wait Time from referral to first specialist appointment, and intra appointment within the Gynaecology Clinical Pathway for all women referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010**



**Figure 8: Wait time from surgical booking to time of surgery for those women referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009- 30 June 2010**



**DELAY IN THE HOSPITAL SYSTEM  
PATHWAY IS ATTRIBUTABLE TO  
EXCESSIVE NUMBERS OF FOLLOW  
UP APPOINTMENTS WITHIN THE  
HOSPITAL CLINICS, AND  
PROLONGED DURATION TO  
RESOLUTION.**

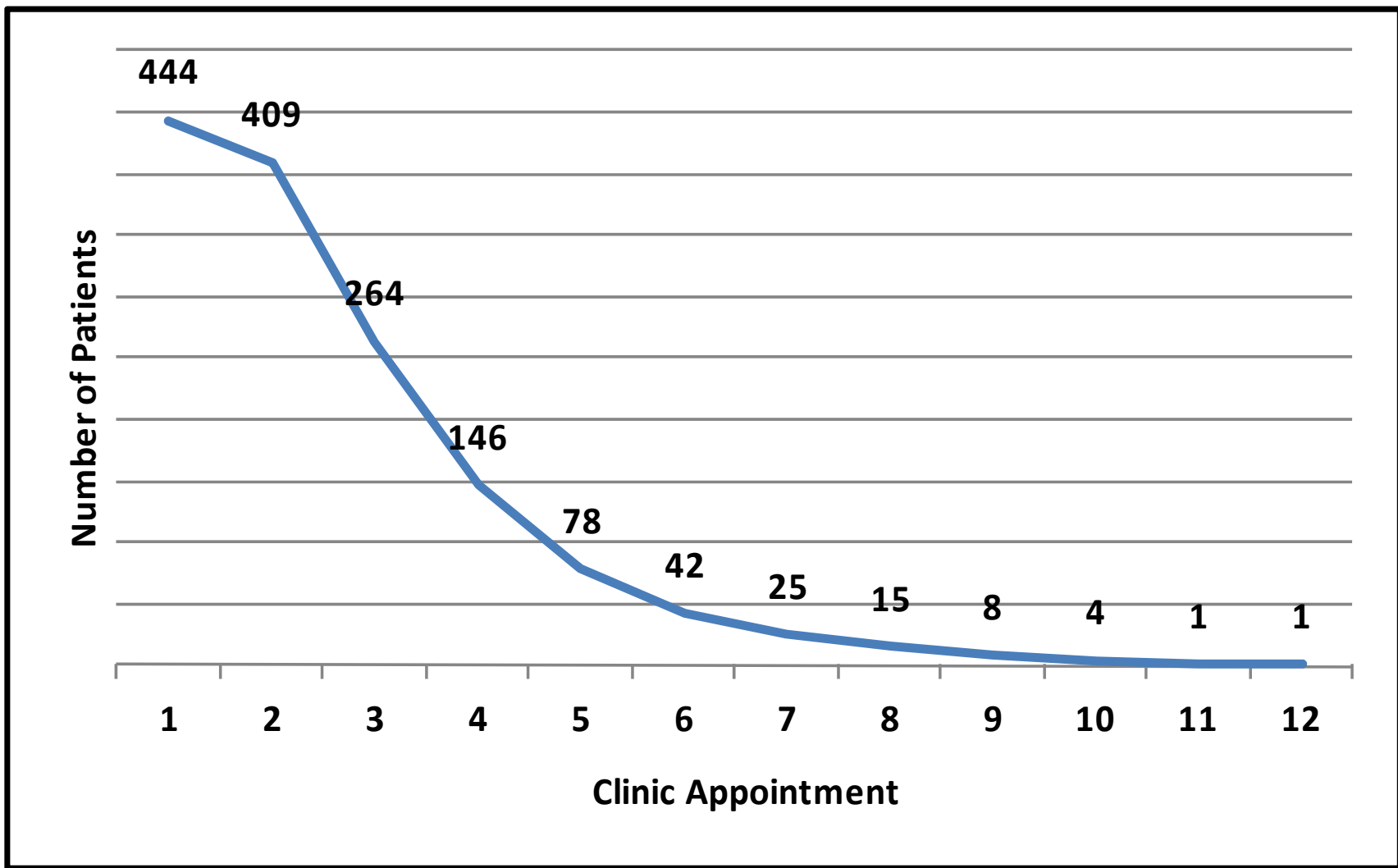
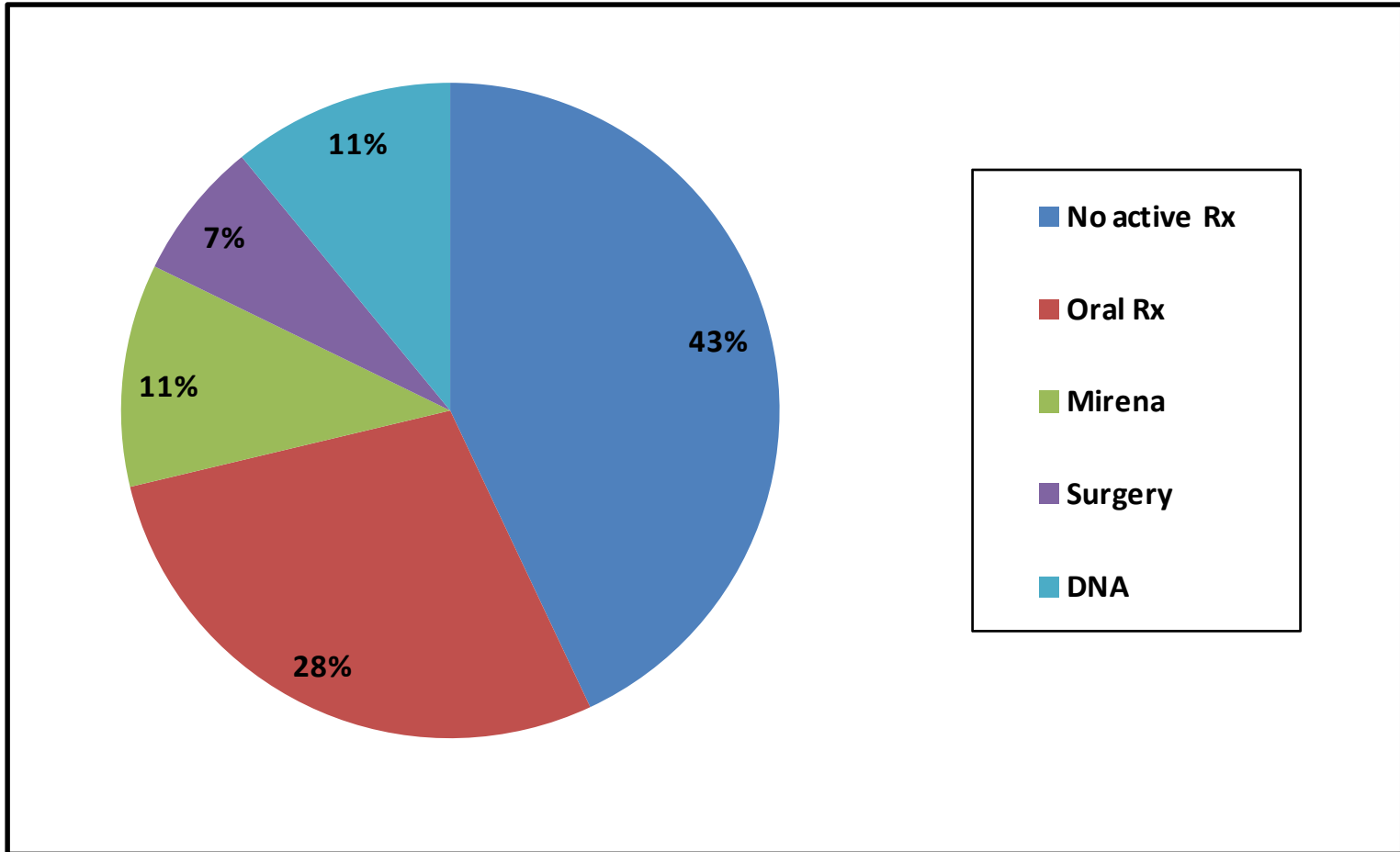
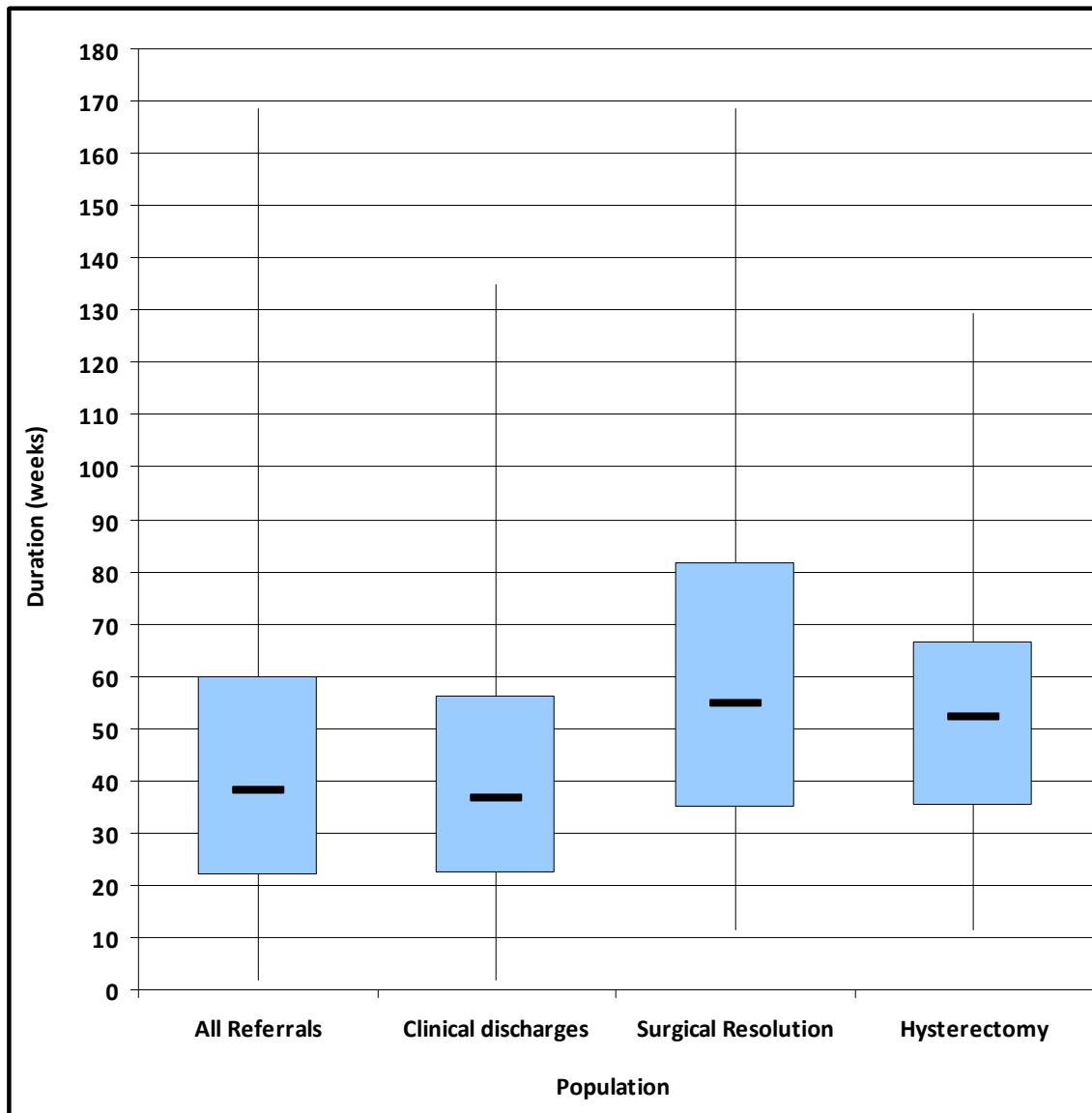


Figure 9: Number of patients remaining in the Gynaecology Care Pathway of patients referred with Abnormal Uterine bleeding to the General Gynaecology and Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010

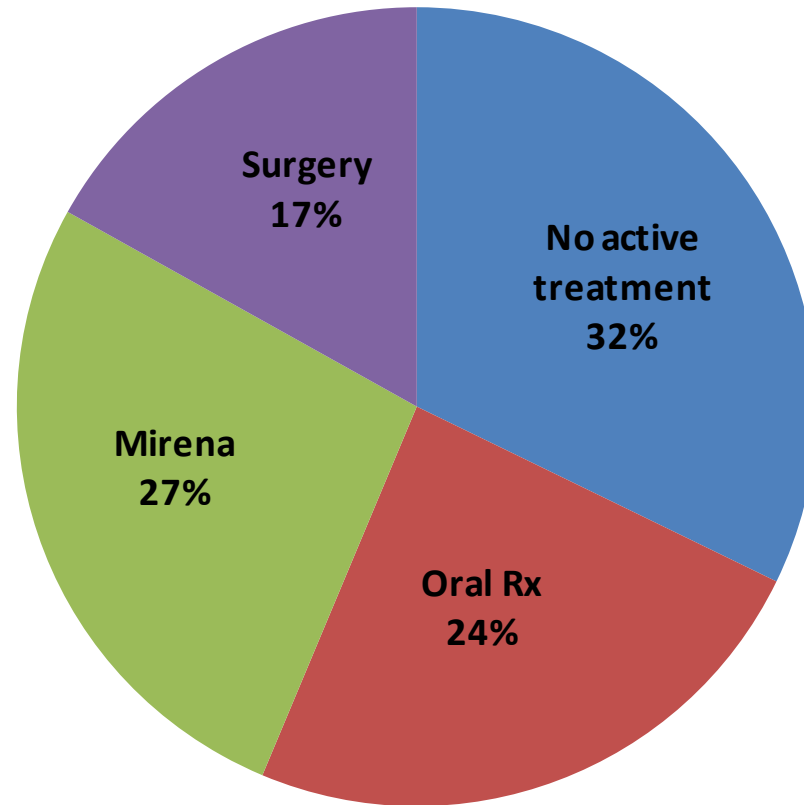


**Figure 10: Outcomes following each scheduled clinic appointment for women referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009- 30 June 2010**

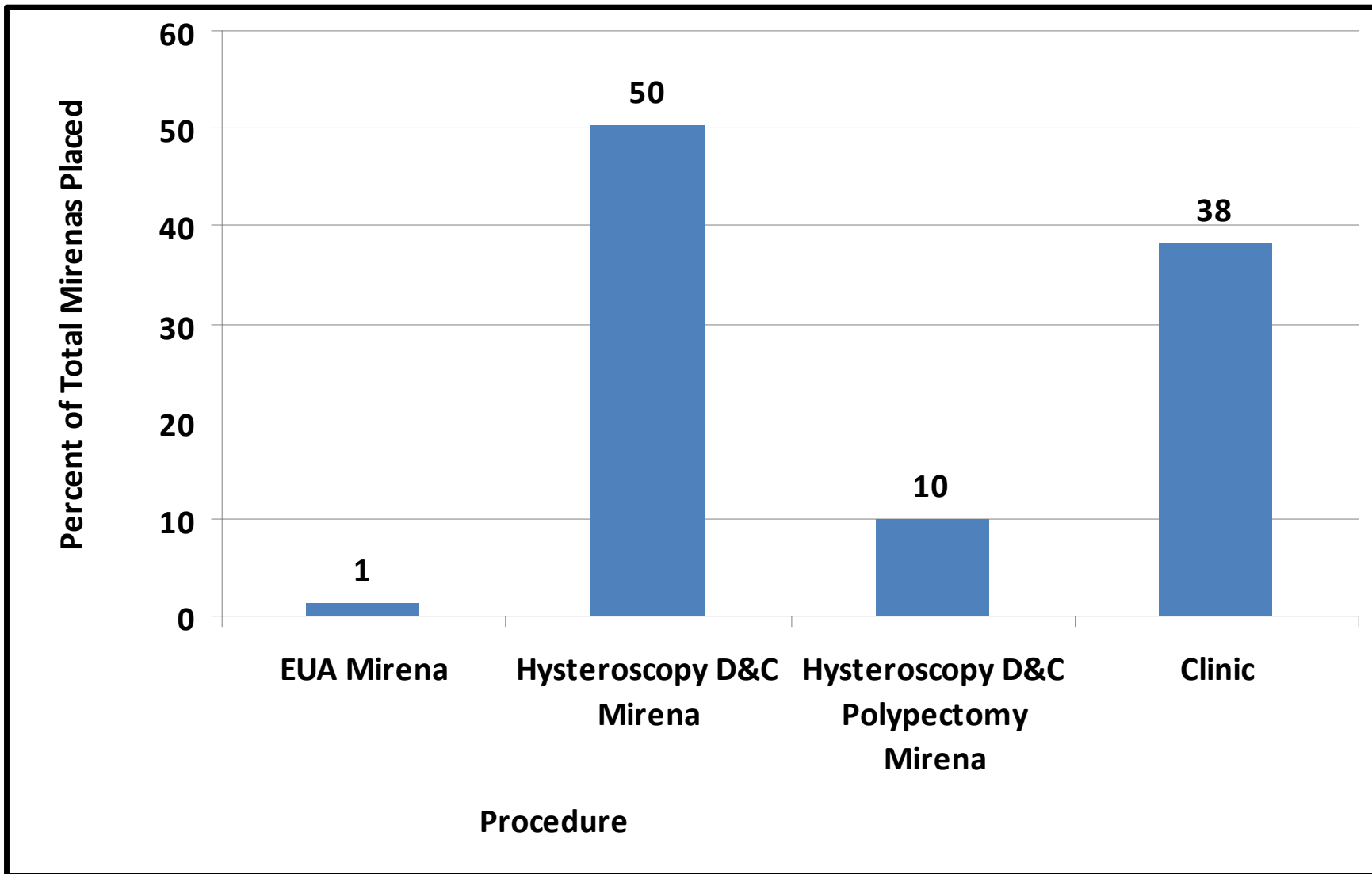


**Figure 11: Wait time from date of referral to exit from the Gynaecology Clinical Pathway for all women referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 - 30 June 2010**

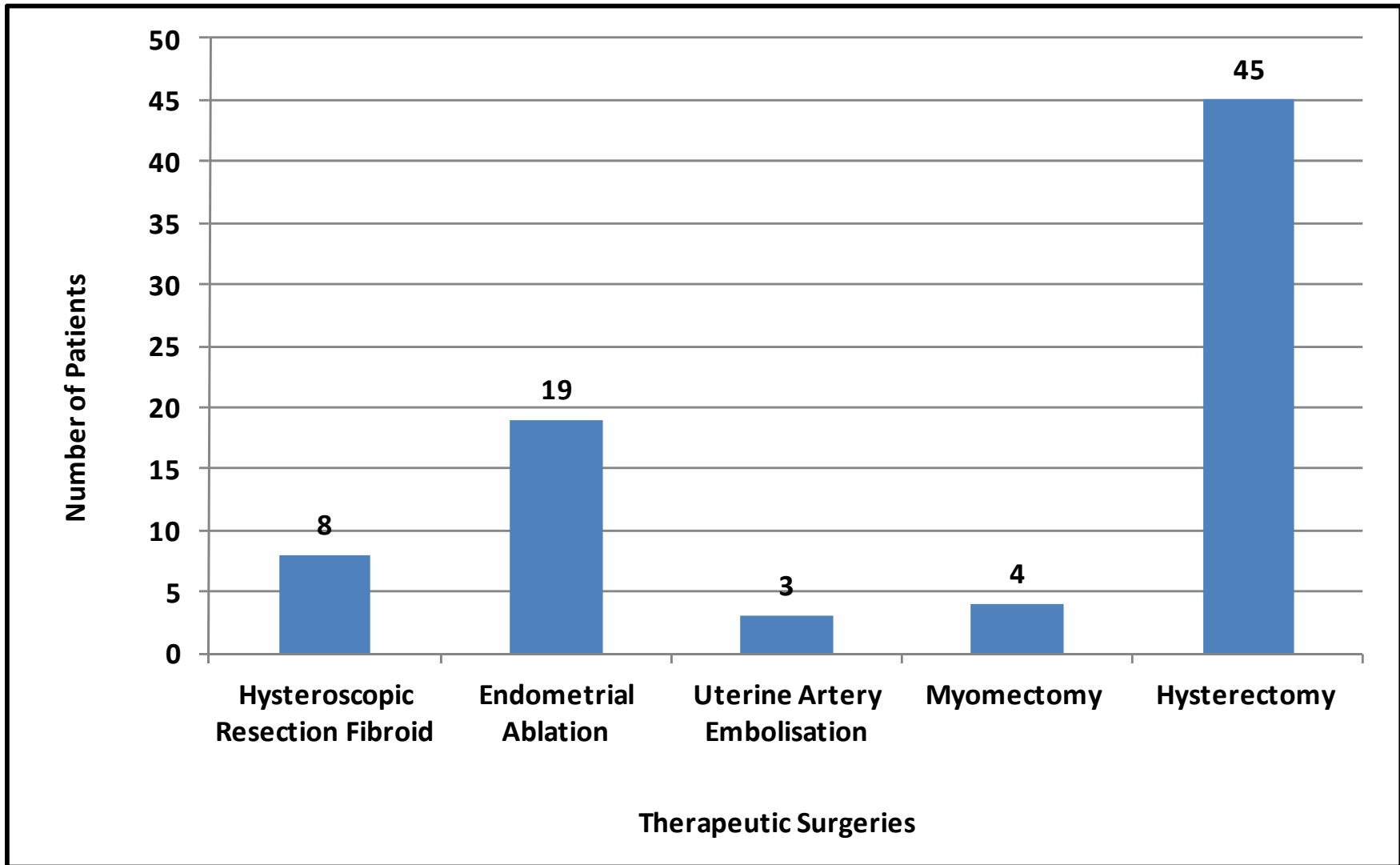
**DELAY IN THE HOSPITAL SYSTEM  
PATHWAY IS ATTRIBUTABLE TO  
OVER ENTHUSIASTIC RECOURSE TO  
NON SURGICAL TREATMENT  
MODALITIES AND/OR CLINICIAN  
HESITANCY FOR PREMATURE  
SURGICAL MANAGEMENT**



**Figure 12: Final treatment modality for all patients referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010**

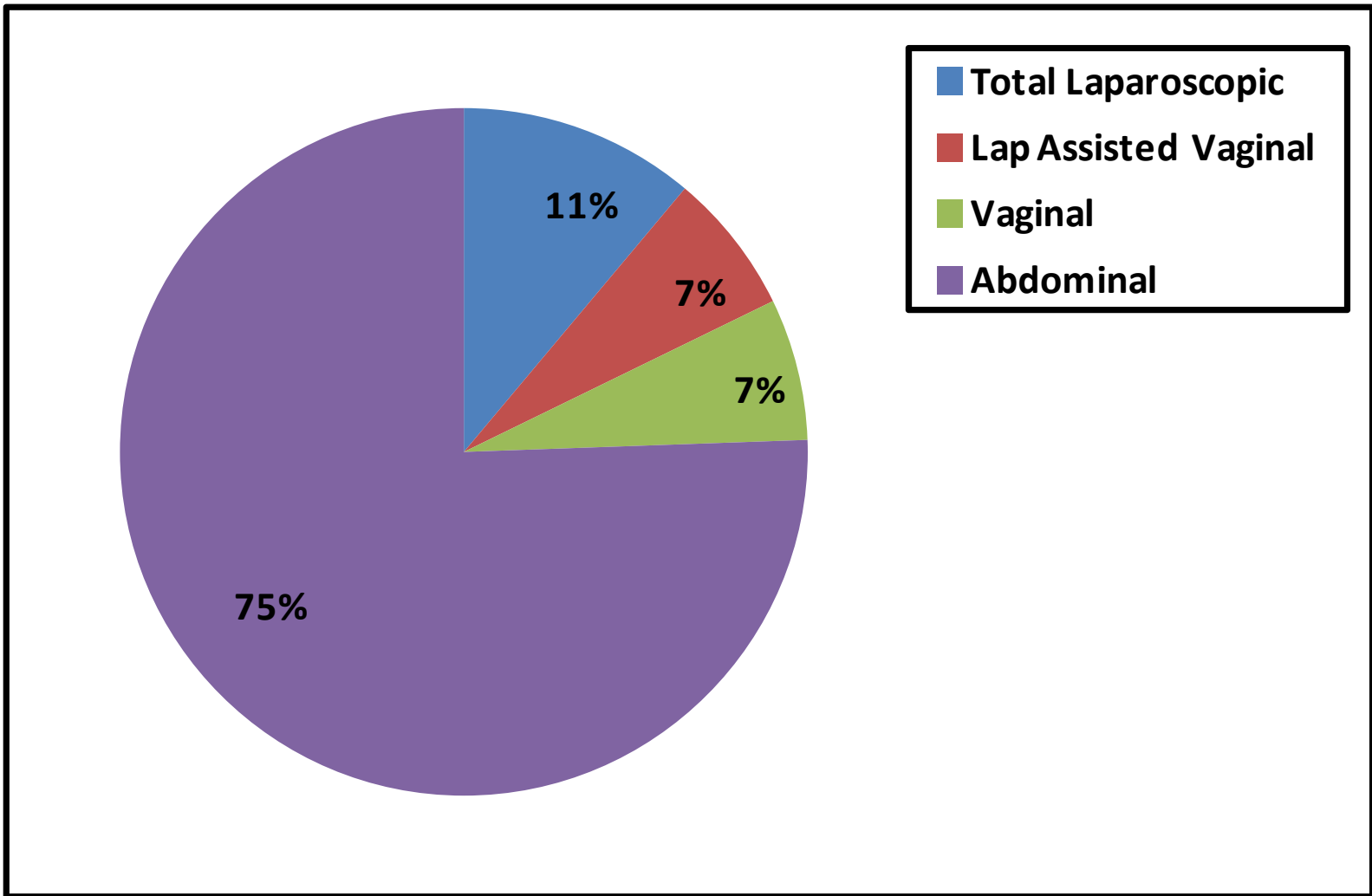


**Figure 13: Method of Mirena Insertion for those women referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010 who underwent Mirena insertion in the Operating Theatre**



**Figure 14: Types of therapeutic surgeries performed amongst women referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010 who had surgical management**





**Figure 15: Hysterectomy approach for women referred with Abnormal Uterine bleeding to the General Gynaecology or Menstrual Disorders Clinics at ADHB 01 July 2009 – 30 June 2010 undergoing hysterectomy as method of treatment**

# RECOMMENDATIONS



# Ministry of Health

- Mandatory reporting of all privately performed surgery to facilitate accurate health policy and provision planning

# Gynaecology Service

- **Development of a pre referral template for premenopausal abnormal uterine bleeding including:**
  - Investigations performed – FBC, genital swabs, smear status, ultrasound scan
  - Treatments trialled – NSAIDs, tranexamic acid, oral hormonal, Mirena IUS
- **Possible generation of broader menstrual disorders clinic with presence of clinicians skilled in hysteroscopic resection, ablation, open and laparoscopic surgical approaches, and the interventional radiologists to offer UAE all within the one multidisciplinary clinic setting.**
- **Possibility of setting up outpatient hysteroscopy facilities within the outpatient clinic if more acceptable to clinicians.**
- **Formalised departmental protocol for the management of non attendances within the outpatient clinic.**
- **Emphasis on ensuring a specific clinical outcome measure is achieved following each and every clinic appointment to minimise inefficiency within the system**
- **Ongoing focus on trying to improve efficiency within the system and keep wait times to a minimum**
- **Provision for upskilling of current specialists to encourage broader range of experience in the less invasive surgical options AND various approaches of performing hysterectomy**

# Clinicians

- Update on assessment of endometrial sampling amongst specialists at the DHB with an emphasis on utilising office based sampling methods over hysteroscopy D&C
- Focus to make placement of Mirenas in the clinic setting the rule, reserving placement under anaesthesia for the minority of cases where required
- Upskilling in the theoretical +/- practical abilities with ablation, hysteroscopic resection and uterine artery embolisation
- Review of approach of hysterectomy in accordance with international guidelines. Possible further training in regards to laparoscopic and laparoscopic assisted approaches if lack of clinician skill is the limiting factor here.

# Primary Care

- Minimum expected pre referral investigations
  - FBC
  - Genital swabs
  - Smear
  - Pelvic USS
- Minimum expected trialled treatment strategies for women without risk factors for hyperplasia
  - Trial of tranexamic acid and NSAIDs in all women unless contraindicated
- ?Potential upskilling within the primary sector regarding the ability to take pipelles and place Mirenas

**THANKS**

