



# Using public dental services: patient attitudes and beliefs

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# Research

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- Research into the use of public dental services in SA was conducted as part of my PhD
- The research timeframe was between 1999 and 2003
- It was carried out to determine whether patient dental attitudes and beliefs or structural factors within the public dental system were important in shaping patients' dental visiting

# Research

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- It was thought that many of those who currently attend public dental clinics for EDC may do so because of actual or perceived difficulty in obtaining immediate care from the GDS.
- It was hypothesised that they may develop cyclic EDC attendance behaviours to the detriment of improving their oral health and well-being.
- There are few confirming data in Australia that validate anecdotal observations about adults who seek emergency public dental care so this research sought to inform us on this issue.

# Research - Part 1

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- First part of this research examined the dental visiting behaviour of a sample of public dental patients over an average period of approximately 3½ years
- Patients were followed from mid-1999 to end-2002

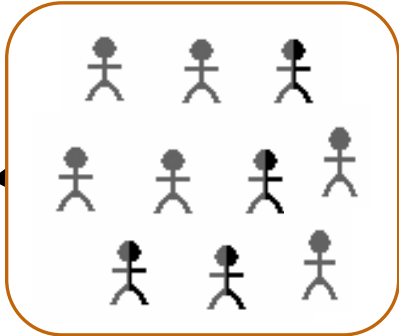
# Sample

Recruited in  
1999/2000

Baseline sample  
for which data  
extracted

## EDC patients

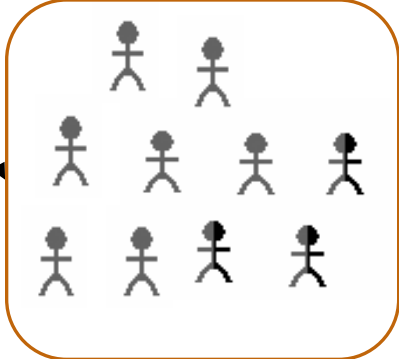
(emergency CoC at baseline)



$n = 427$

## GDC patients

(general CoC at baseline)



$n = 471$

## EDC follow-up

$n = 413$   
(96.7%)

Followed up to  
end of 2002  
(~3.5 yrs)

Mean follow-up=2.85 yrs  
period

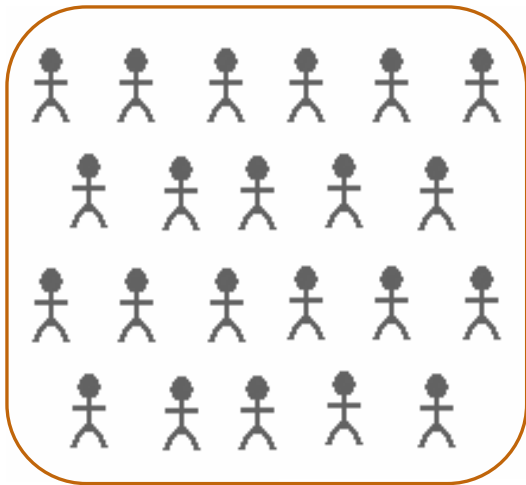
## GDC follow-up

$n = 431$   
(91.5%)

Followed up to  
end of 2002  
(~3.5 yrs)

Mean follow-up=3.01 yrs  
period

Public dental patients presenting  
for emergency dental care (EDC)  
or general dental care (GDC)  
at baseline

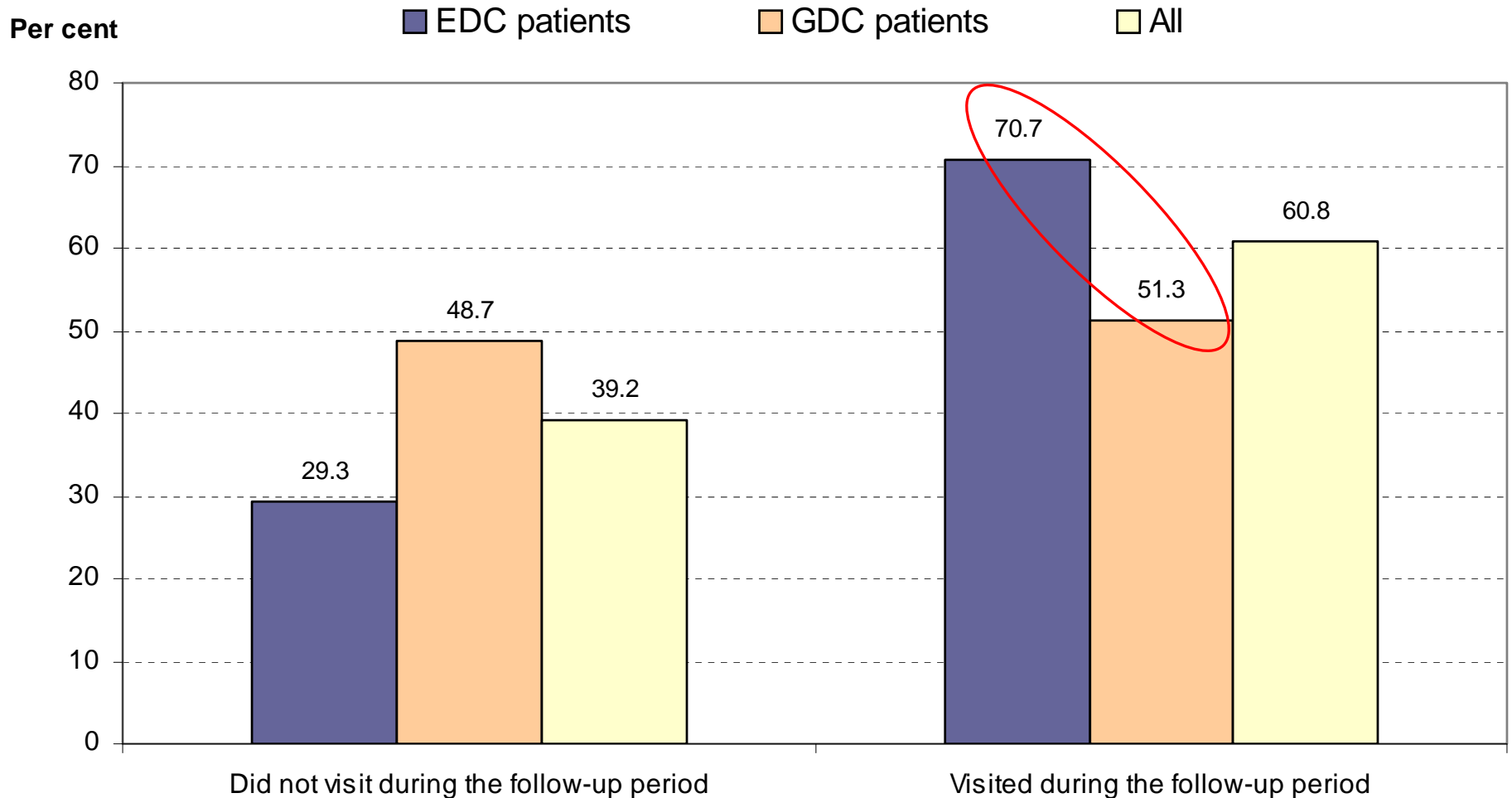


# Research - Part 1: Findings

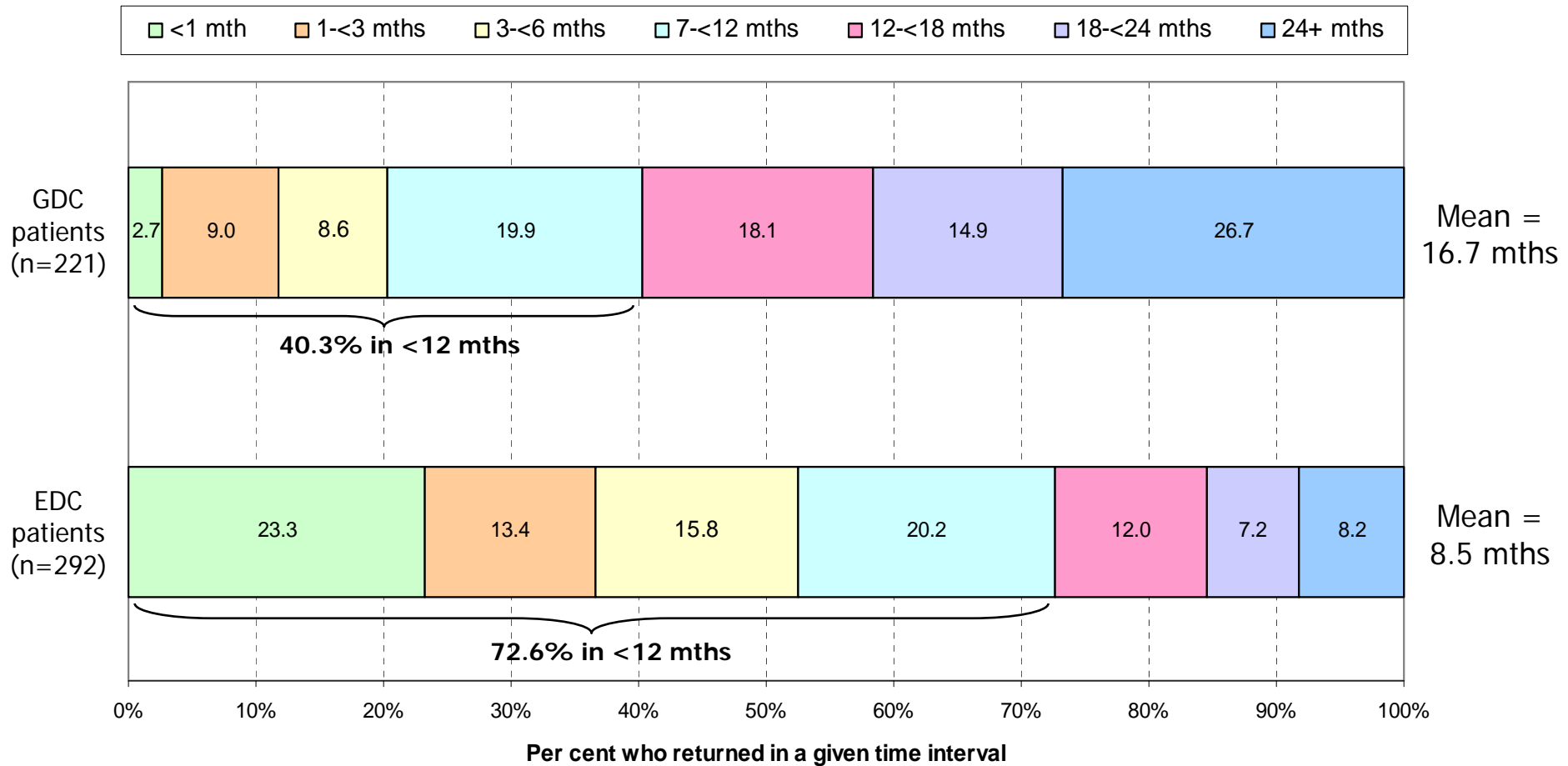
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- It was found that the majority who attended the public dental service for dental care within the follow-up period received emergency dental care only

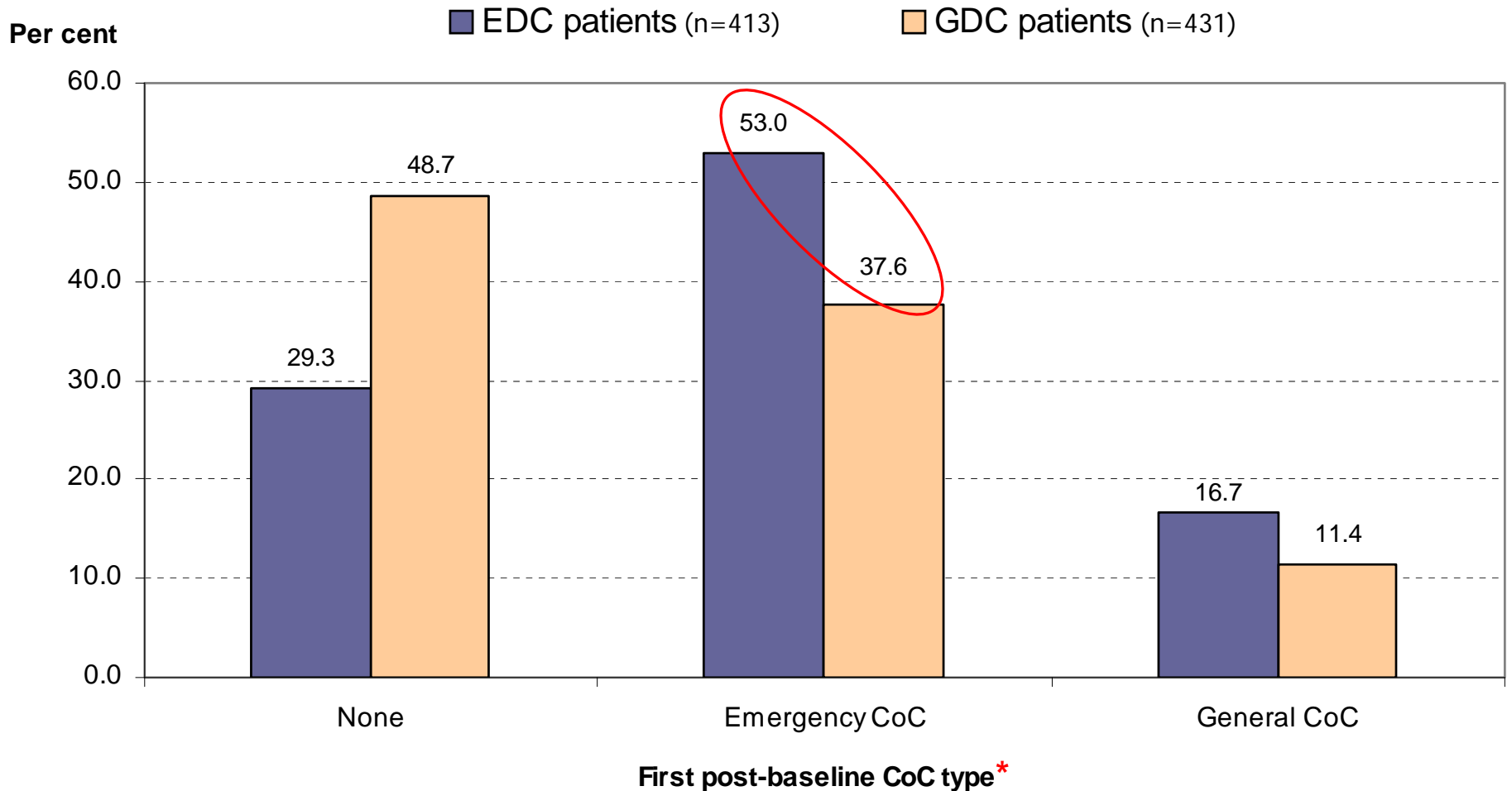
# Percent who visited during the follow-up period



# Time taken to return for first post-baseline CoC

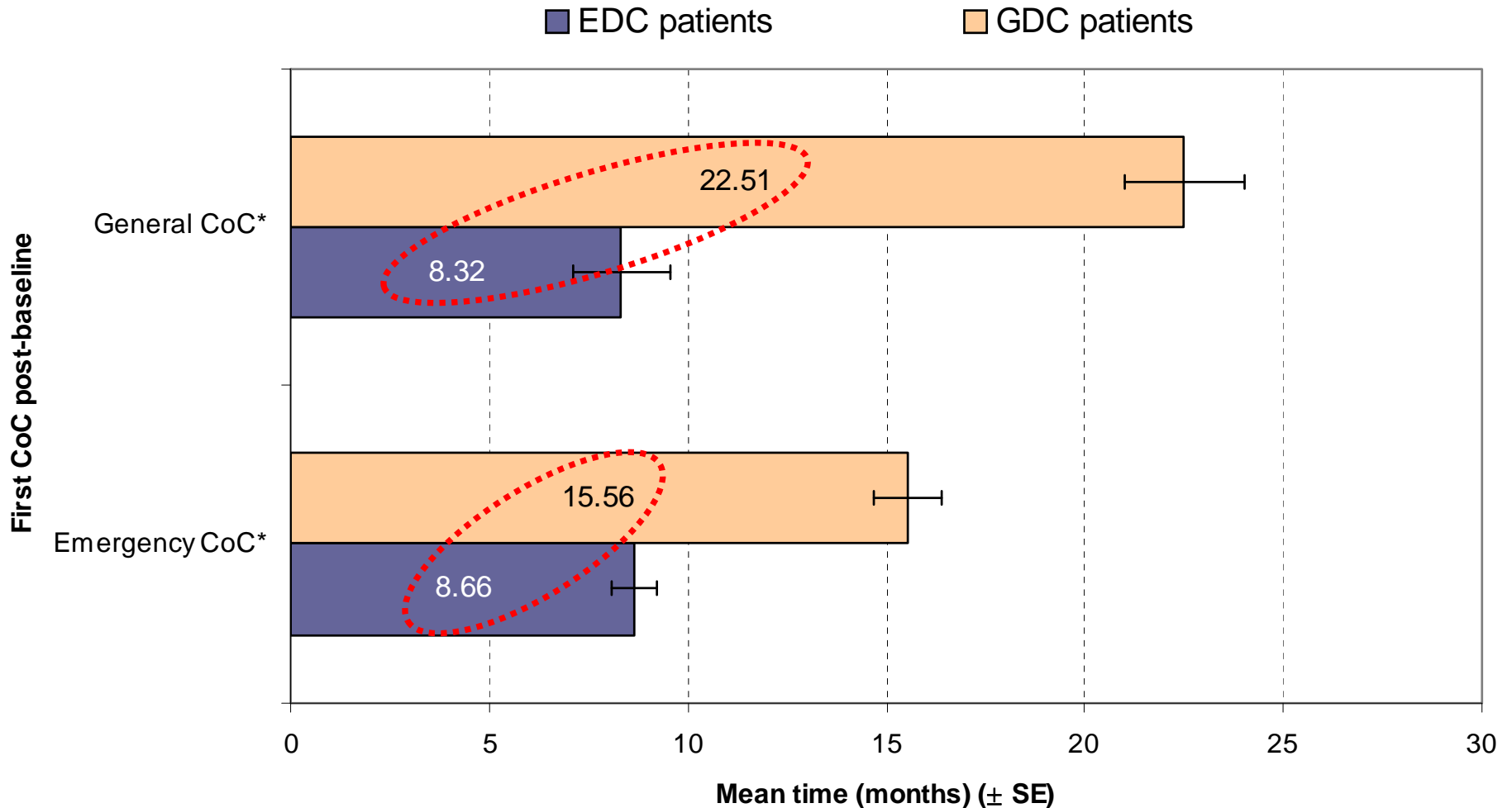


# First post-baseline CoC type



\* P<0.0001;  $\chi^2$  test

# Time taken to first return by first post-baseline CoC



\*(Baseline Sample x First post-baseline CoC)  $P < 0.01$ ; UNIANOVA

# Number of CoC post-baseline

Number of CoC post-baseline*	EDC <i>n=413</i>		GDC <i>n=431</i>
0 CoC	29.3%	↔	48.7%
1 CoC	21.5%		21.3%
2 – 3 CoC	27.4%	$\bar{x}=82.17$ mths	19.9%
4+ CoC	21.7%		10.0%
			$\bar{x}=112.45$ mths

\*  $P < 0.0001$ ;  $\chi^2$  test, ANOVA

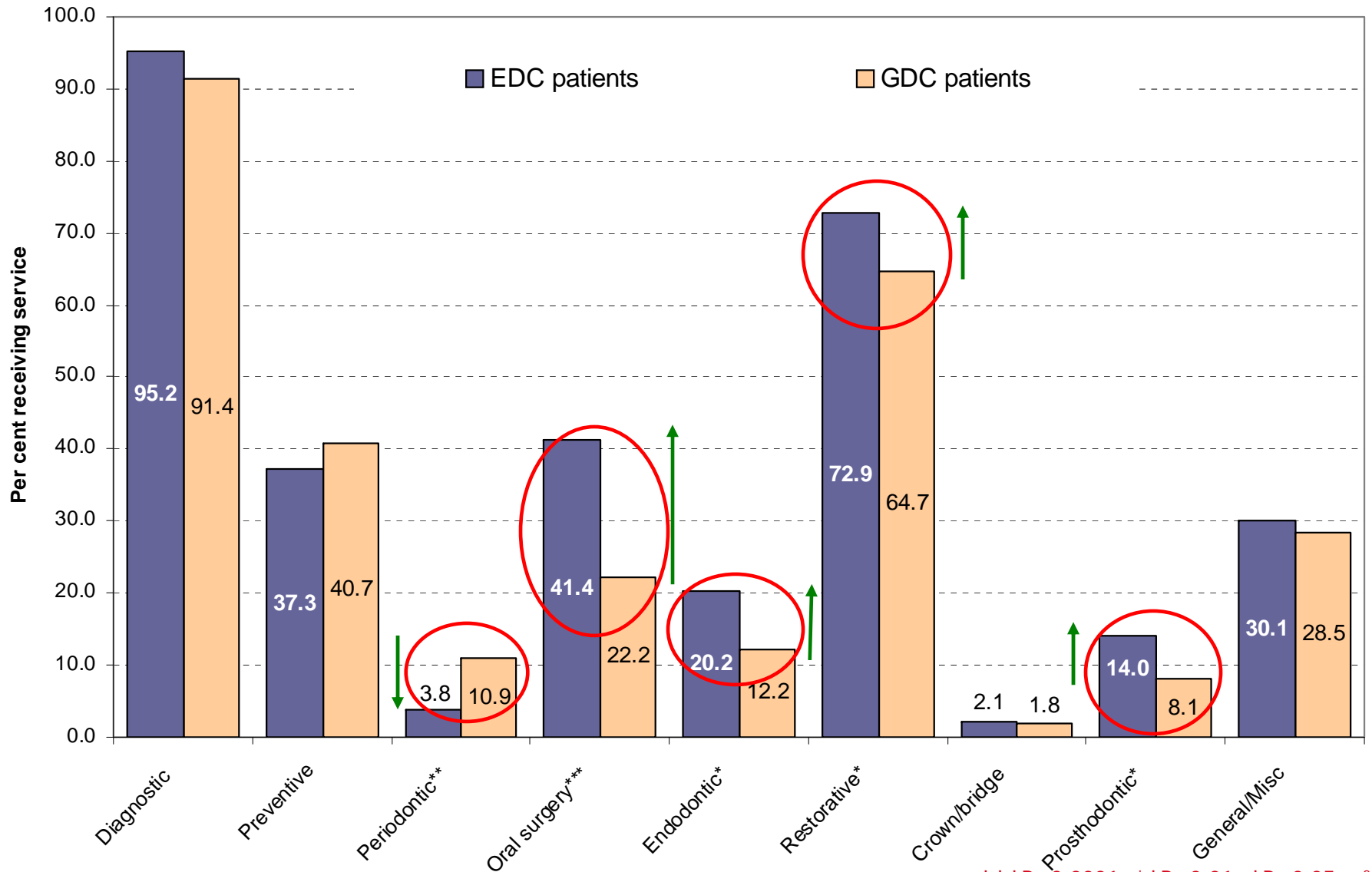
‡ Std Error = 0.15, †0.12

# Examining dental service use

- Examine types of services received by persons in each sample during the follow-up
- Uneven follow-up periods for subjects so convert services to rates, i.e.,

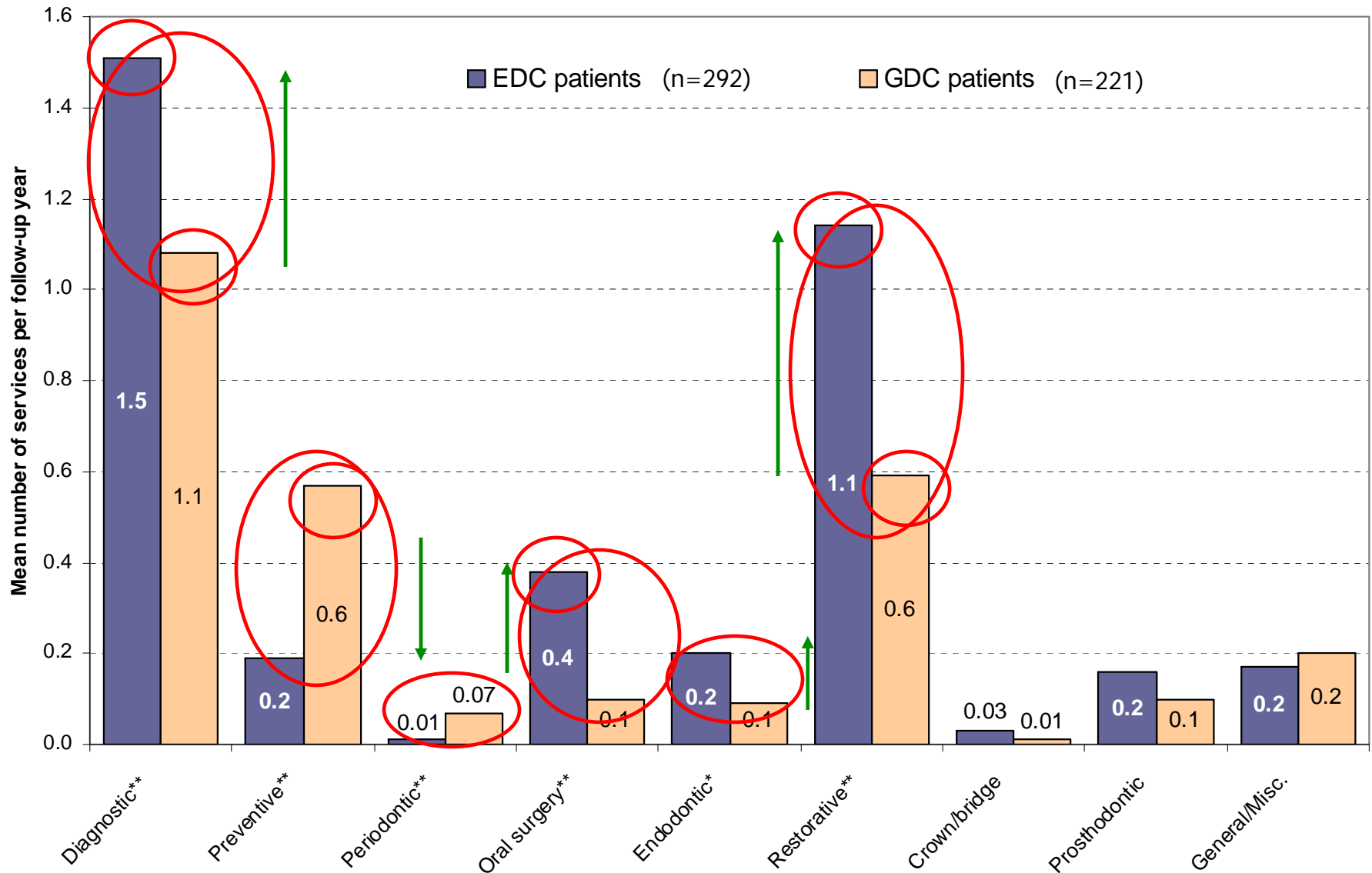
$$\text{No. services per follow-up yr} = \frac{\text{total no. services received}}{\text{no. of yrs followed}}$$

# Distribution of services across the follow-up period



\*\*\*P<0.0001; \*\*P<0.01; \*P<0.05;  $\chi^2$  test

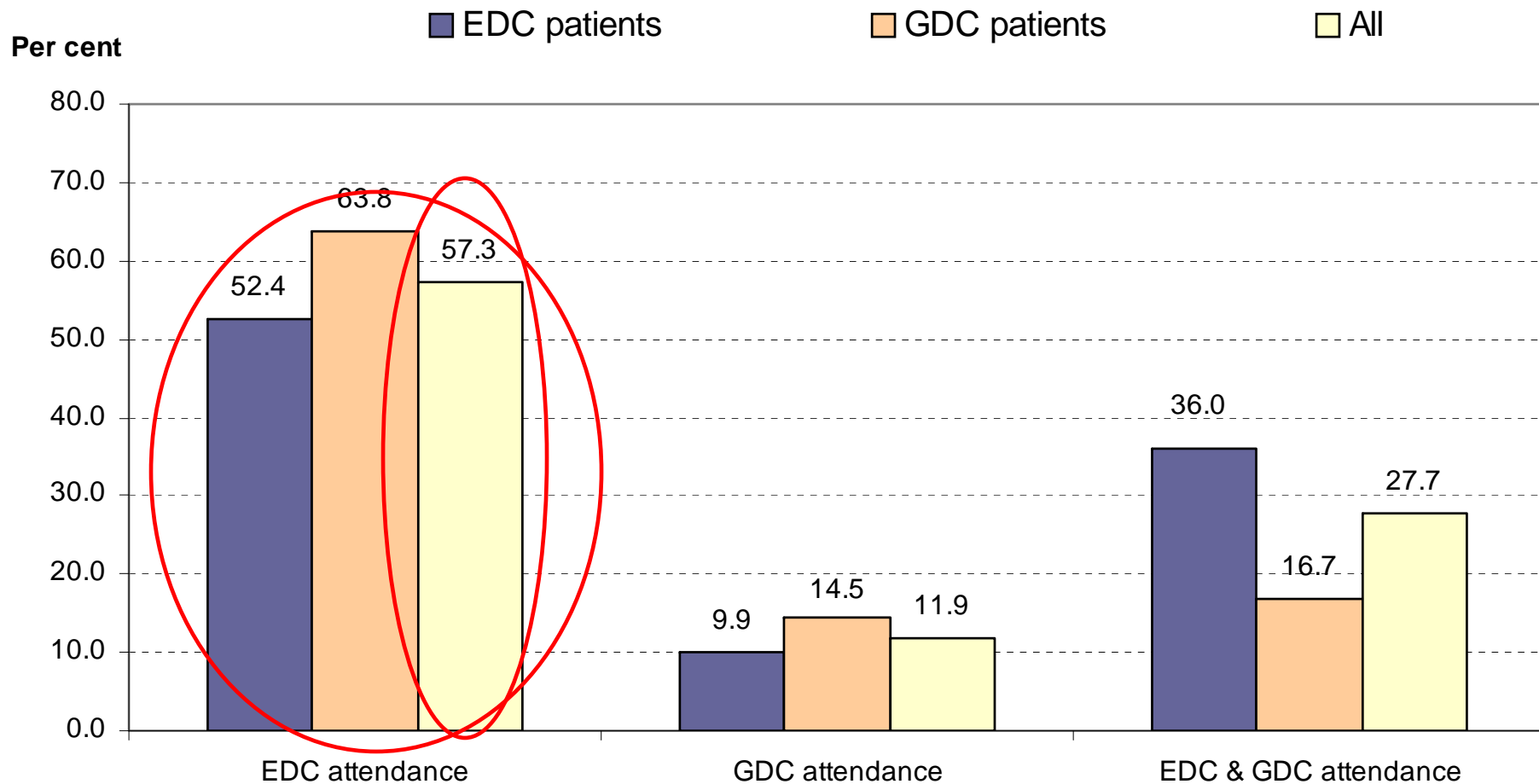
# Mean services per follow-up year



\*\*P<0.0001; \*P<0.05; ANOVA

# Type of care patients received during the follow-up

For the 60.8% of patients who returned for care within the follow-up period...



# Next step...

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- Given that the majority of patients appeared to be receiving emergency dental care only, the next part of this research examined factors thought to influence the way that patients end up using the public dental service
- Factors such as dental attitudes and beliefs were examined to help understand the decision making process surrounding dental visiting

# Research - Part 2: Questionnaire

- A questionnaire was sent to EDC and GDC patients to identify patient beliefs, values and attitudes wrt visiting a public dentist/using the public dental service
  
- The following measures were obtained:
  1. dental visiting intention;
  2. attitudes toward dental visiting;
  3. perceived social pressure to visit the dentist; and
  4. perceived behavioural control in relation to visiting the dentist, i.e.,
    - self-efficacy
    - perceived control

# Measure of Intention

## ■ INTENTION

- ▶ should capture a person's overall intention to visit the dentist
- ▶ 2 items used to assess intentions, i.e.,

“I want to visit the dentist”

“I plan to visit the dentist”

using a 7-point disagree-agree response format

# Measure of Attitude

## ■ ATTITUDE

- ▶ should capture a person's overall evaluation of visiting the dentist
- ▶ evaluate the behaviour on several bipolar adjective scales, i.e.,

“My visiting the dentist would be...”

harmful-beneficial, *unpleasant-pleasant*, or  
worthless-worthwhile

# Measure of Perceived Social Pressure

## ■ PERCEIVED SOCIAL PRESSURE

- ▶ should capture a person's perceptions of others' level of support toward them visiting the dentist

- ▶ 3 items used to assess perceived social pressure, i.e.,

“People who are important to me...

...think that I should visit the dentist”

...would approve of me visiting the dentist”

...want me to visit the dentist”

using a disagree-agree response format

# Measure of Perceived Behavioural Control

- PERCEIVED BEHAVIOURAL CONTROL
  - ▶ should capture people's confidence that they are capable of visiting the dentist
  - ▶ Require items that capture:
    1. person's sense of self-efficacy wrt visiting the dentist
    2. the behaviour's controllability, i.e., perceived control over visiting the dentist

# Measure of Perceived Behavioural Control ctd.

- Self-efficacy
  - ▶ items that relate to the difficulty of visiting the dentist, or the likelihood that the respondent can visit the dentist
  - ▶ 2 items used to assess self-efficacy, i.e.,
    - “For me to visit the dentist from now on would be...”  
(difficult-easy)
    - “What is the likelihood of you visiting the dentist from now on?”  
(unlikely-likely)

# Measure of Perceived Behavioural Control ctd.

- Behaviour's controllability
    - ▶ items that address people's beliefs that they have control over visiting the dentist, that visiting the dentist is or is not up to them
    - ▶ 4 items used to assess controllability, i.e.,
      - “Whether or not I visit the dentist is entirely up to me”
      - “It is mostly up to me whether I visit the dentist”
      - “I have complete control over whether or not I visit the dentist”
      - “There are factors outside my control that could prevent me from visiting the dentist”*
- using a disagree-agree response format

# Beliefs underlying attitudes, perceived social pressure and perceived behavioural control

- Beliefs underlying attitudes, perceived social pressure and perceived behavioural control were also examined
- This was done by asking patients about their beliefs in relation to visiting the dentist, in particular:
  - ▶ the advantages and disadvantages of visiting the dentist – these beliefs underlie one's attitude toward dental visiting
  - ▶ people who would encourage or discourage them from visiting the dentist – these beliefs underlie one's perceptions about social pressure to visit the dentist
  - ▶ what factors might facilitate or hinder them from visiting the dentist – these beliefs underlie one's perceptions of behavioural control

# Advantages and disadvantages of visiting the dentist

## ADVANTAGES

1. Prevent decay
2. Keep teeth healthy
3. Prevent future problems
4. Keep teeth looking good
5. Prevent pain
6. Maintaining good oral health
7. Receive preventive Tx
8. Have teeth cleaned
9. Receive necessary fillings
10. Prevent tooth loss
11. Receive dental advice
12. Get problem/s fixed

## DISADVANTAGES

1. Receive unnecessary extractions
2. Long wait for appt
3. Painful dental Tx
4. Not being seen promptly
5. Being afraid
6. Being anxious

# Support people

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1. Family
2. Partner
3. Parent/s
4. Mother
5. Friend/s

# Factors facilitating/hindering visiting the dentist

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1. There would be long waiting lists
2. Dental treatment would be costly
3. Would have to pay a gap, i.e., a co-payment
4. Would have a bad dental experience
5. Would not have a choice of dentist
6. Would be afraid about visiting the dentist
7. Would be anxious about visiting the dentist
8. The dental clinic would not be conveniently located

# Sample characteristics

<b>Characteristic</b>	<b>Total sample</b>
Sex - females	60.0 (515)
Age	54.9 ± 16.3
Australian born	57.6 (509)
English mainly spoken at home	90.2 (509)
Indigenous status	0.8 (508)
Has private dental insurance	10.4 (510)
Has some or all natural teeth	99.0 (514)

NOTE: Data are % (n) or means ± SD

# Advantages and disadvantages of visiting the dentist

## ADVANTAGES

### % agree

1. Get problem/s fixed ..... 93.5
2. Prevent pain ..... 90.2
3. Keep teeth healthy ..... 89.9
4. Receive dental advice ..... 89.2
5. Maintaining good oral health ..... 87.4
6. Prevent future problems ..... 87.3
7. Receive necessary fillings ..... 86.4
8. Keep teeth looking good ..... 85.0
9. Receive preventive Tx ..... 81.0
10. Prevent decay ..... 79.5
11. Have teeth cleaned ..... 74.7
12. Prevent tooth loss ..... 71.1

## DISADVANTAGES

### % agree

1. Long wait for appt ..... 70.7
2. Being anxious ..... 57.1
3. Painful dental Tx ..... 53.5
4. Being afraid ..... 50.0
5. Not being seen promptly ..... 42.6
6. Receive unnecessary extractions ..... 27.1

# Support people

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	<u>% perceiving support</u>
1. Family	83.4
2. Partner	82.6
3. Mother	72.1
4. Parent/s	70.8
5. Friend/s	70.0

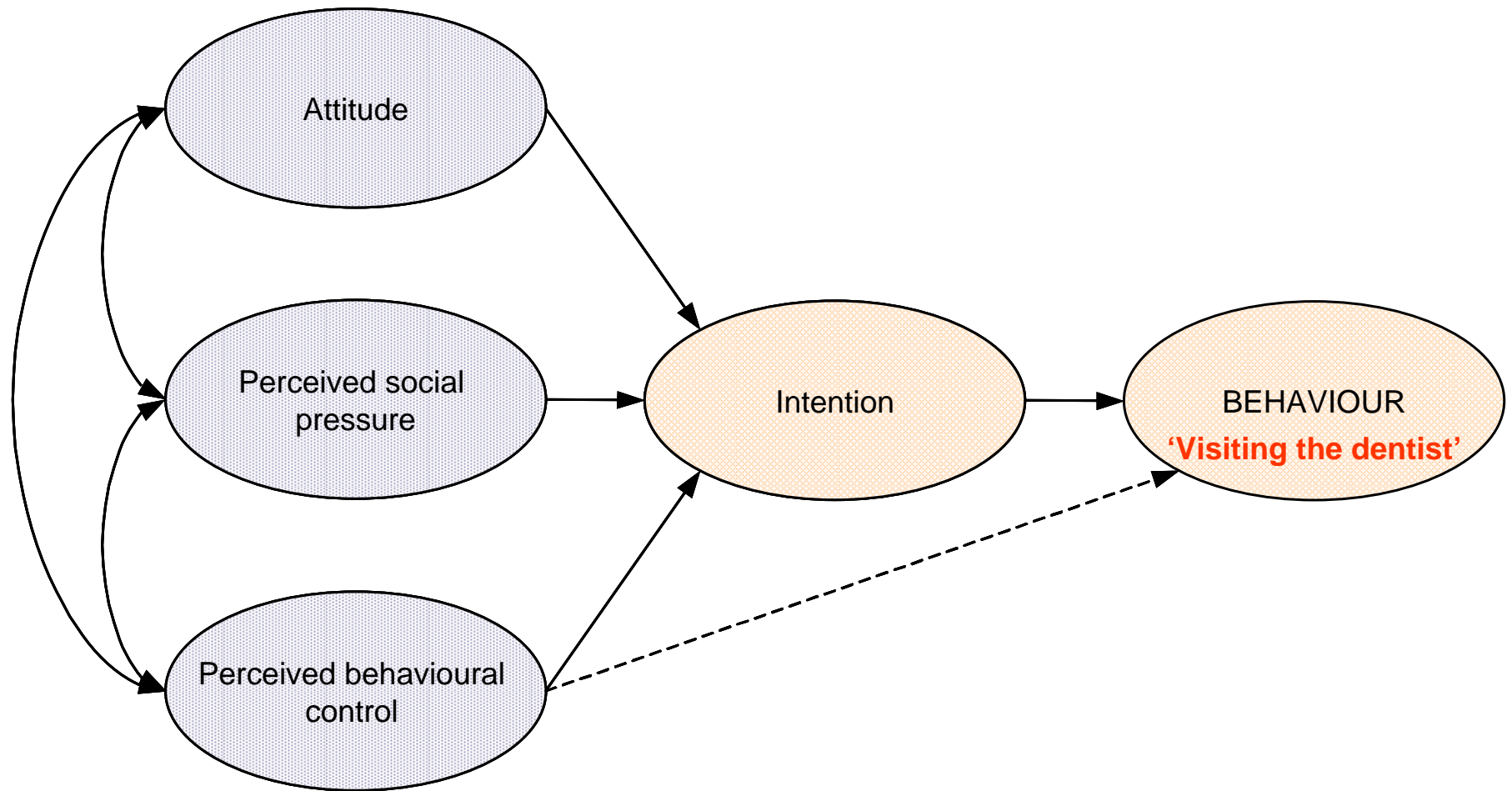
# Factors facilitating/hindering visiting the dentist

	<u>% agree</u>	<u>% reporting difficulty</u>
1. There would be long waiting lists	78.5	82.8
2. Would have to pay a gap, i.e., a co-payment	74.9	79.9
3. Dental treatment would be costly	62.3	94.3
4. Would not have a choice of dentist	59.8	47.4
5. Would be anxious about visiting the dentist	46.8	81.3
6. Would be afraid about visiting the dentist	36.3	83.2
7. The dental clinic would not be conveniently located	28.7	36.8
8. Would have a bad dental experience	22.3	68.6

# Contribution of each belief to one's respective attitude, perception of social pressure and perceived behavioural control

- When examining the contribution of each belief to one's respective attitude, perception of social pressure and perceived behavioural control the following approach was taken:
- For attitude, the contribution of each belief to one's attitude was weighted by the likelihood of it occurring and the importance of the particular belief
- For perceived social pressure, the influence of each important person was weighted by one's perception about the support from that important person and one's motivation to comply with that person
- For perceived behavioural control, the contribution of each control factor to visiting the dentist was weighted by the likelihood of its presence and the difficulty it would pose

# Model used to examine factors influencing behaviour



**KEY:**

Independent variables

Dependent variables

- Examine beliefs differentiating
  - ▶ high intenders from low intenders
  - ▶ emergency dental care attenders from general dental care attenders
  
- High intenders= those with moderate-strong intentions to visit the dentist

Low intenders = those with slight or no intention to visit the dentist

# Low intenders vs. high intenders by beliefs held

## BELIEFS UNDERLYING ATTITUDES

- High intenders had more positive attitudes towards
  - ▶ prevention of tooth decay
  - ▶ maintaining healthy teeth
  - ▶ prevention of future problems
  - ▶ keeping teeth looking good
  - ▶ maintaining good oral health
  - ▶ being seen promptly for their dental appt
  - ▶ dental anxiety Low intenders thought they'd be more anxious about visiting

## BELIEFS UNDERLYING PERCEIVED SOCIAL PRESSURE

- Low intenders perceived less positive social pressure to visit the dentist from their family, partner, parent/s and friend/s.

## BELIEFS UNDERLYING PERCEIVED BEHAVIOURAL CONTROL

- Both high and low intenders perceived the following barriers to visiting the dentist
  - ▶ long waiting lists Higher intenders reported greater levels of difficulty associated with long WL
  - ▶ the cost of dental care
  - ▶ having had a bad dental experience
  - ▶ not being able to choose the treating dentist
  - ▶ being afraid of anxious Low intenders reported greater levels of difficulty visiting the dentist in relation to being dentally anxious

# Emergency vs. General attenders by beliefs held

## BELIEFS UNDERLYING ATTITUDES

- EDC and GDC attenders both held favourable beliefs about visiting the dentist – the majority of beliefs held contributed to a positive attitude toward visiting the dentist
- One shared belief that contributed to a slightly negative attitude toward visiting the dentist was having to wait a long time in the waiting room for their designated appointment.

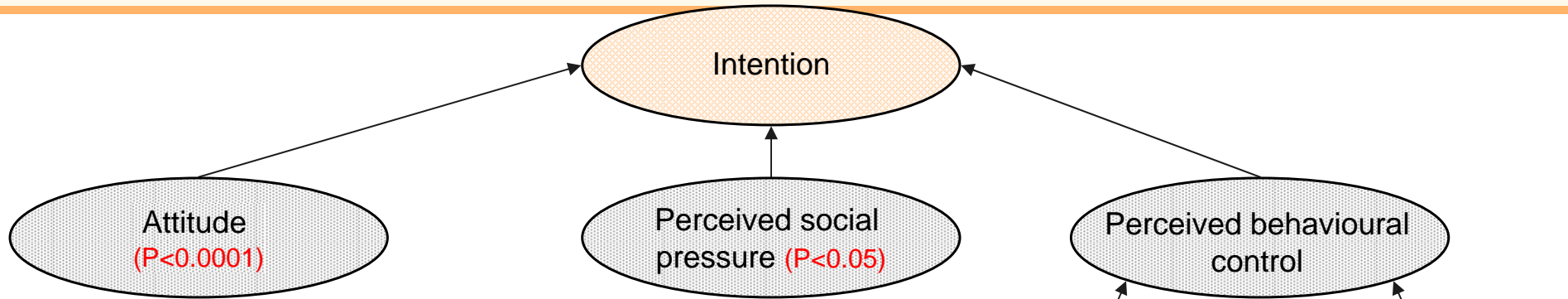
## BELIEFS UNDERLYING PERCEIVED SOCIAL PRESSURE

- EDC and GDC attenders alike perceived reasonably strong positive social pressure from family, partner, parent/s, mother and friend/s to visit the dentist

## BELIEFS UNDERLYING PERCEIVED BEHAVIOURAL CONTROL

- EDC and GDC attenders alike perceived the following factors would hinder their control regarding visiting the dentist
  - ▶ long waiting lists, the cost of dental care, having had a bad dental experience, not being able to choose the treating dentist, being afraid or anxious
- Among both groups
  - ▶ waiting lists were ranked first in relation to contributing to a lack of control - GDC attenders reported feeling more hindered in relation to factor
  - ▶ cost of dental care was ranked second - EDC attenders reported a more negative impact in relation to this factor

# Factors influencing intention to visit the dentist



## Beliefs most strongly connected to intention were:

- Keep teeth healthy
- Prevent future problems
- Maintain good oral health
- Prevent tooth decay
- Keep teeth looking good
- Prevent pain in teeth/mouth/dentures
- Receive preventive treatments
- Receive fillings to fix decay
- Prevent loss of teeth
- NOT being dentally anxious
- Have teeth cleaned
- Receive dental advice
- Be seen promptly

## 'Downsides':

- Receive unnecessary extractions
- Have to wait a long time in the waiting room for the scheduled appt
- Experience painful dental treatment
- Being dentally afraid

## Important influences on intention were:

- Family
- Parent/s
- Mother
- Friends

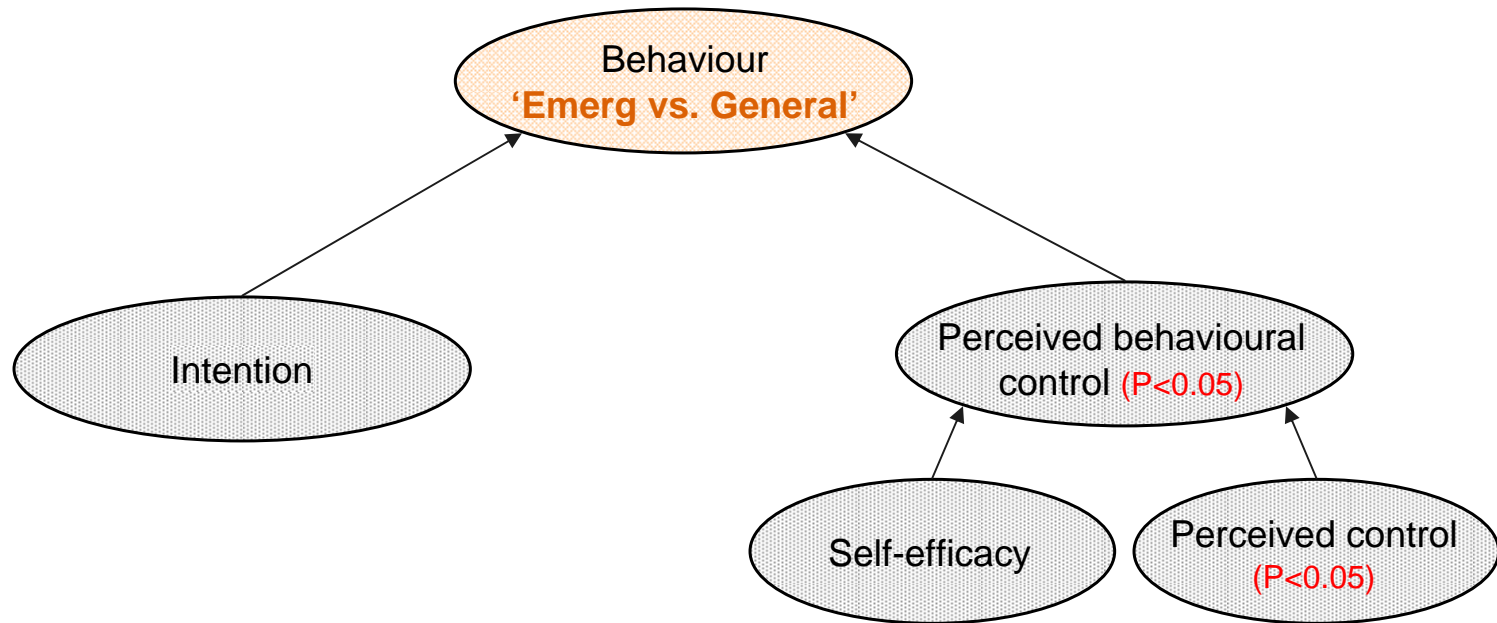
## Underlying beliefs were:

- Bad dental experience
- Dental fear
- Dental anxiety

## Important influences on intention were:

- Long waiting lists
- Cost of dental care

# Factors influencing type of dental visiting behaviour



## Important influences on behaviour were:

- Long waiting lists
- Costly dental Tx
- Paying a co-payment

# Research - Part 2: Findings

- Patient dental visiting behaviour was influenced by limitations of the public dental system
- Patients appeared to be cycling through emergency dental care because of lack of access to general dental care services
- Patient's attitudes toward their dental health and dental visiting were fairly positive, but the experience of structural barriers such as cost of dental treatment and long waiting lists prevented them from receiving the care they need or would like
- This finding moves beyond the individual and recognises that the system plays a vital role in the lack of access to much needed services
- This in itself represented an important and useful finding as often it is difficult to change established attitudes of people but system or structural barriers are more amenable to change

# General message

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- To a large extent, the way public dental patients use public dental services is in the hands of the providers and the way the delivery system is resourced and policies implemented
- Unless these structural barriers to dental care are addressed, patients will engage in dental visiting behaviours that place them at risk of worse oral health outcomes, and this pattern of behaviour could be perpetuated indefinitely

# Significance of research

- Whilst the research time frame represented a period where demand management strategies were just being introduced within SADS, this research is still relevant in painting a background and developing our understanding of use of public dental services
- For instance, demand management strategies introduced by SADS have altered the proportion of patients getting through for EDC and GDC
- As these proportions change, attitudes are still likely to remain positive but the largest change might be seen in perceptions of behavioural control as people may perceive less barriers to dental care, for example waiting lists will shorten allowing them to access dental care on a more timely basis

# Acknowledgements

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