

# Patient Delay in Calling an Ambulance when Experiencing Heart Attack Warning Signs

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# The Problem

- More than 48,000 major coronary events each year, half are fatal
- More than 50% of heart attack deaths occur out-of-hospital
- About 25% of those who have a heart attack die within one hour of their first ever symptom

# Patient Delay

- Early treatment (1-2 hours) reduces death and disability
- ♦ Few people achieve this - one of the main reasons is **patient delay**
- ♦ The median response time to calling 000 is about 6.4 hours – with no improvement over time
- ♦ Delays can cost lives and lead to heart muscle damage and permanent disability



# Warning Signs of Heart Attack Strategy 2008-2012

- The goal is to reduce coronary heart disease mortality and morbidity by reducing patient delay in responding to the warning signs of heart attack and dialling triple zero



# Understanding the barriers to patients calling 000

- 2008 Literature Review - 26 full papers reviewed
- International studies - only in English
- Across all studies median delay longest in Australia - 6.4 hours  
(Dracup et al, 1997)

# Summary of the review

Shorter delay	Longer delay	No difference	Not sure/ equivocal	Insufficient evidence
<ul style="list-style-type: none"> <li>• Attributing symptoms to the heart or to heart attack</li> <li>• Using ambulance transport to hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Ignoring or waiting for symptoms to go away</li> <li>• Consulting with GP</li> <li>• Self treatment</li> <li>• Intermittent symptom pattern</li> <li>• Not wanting to bother others</li> </ul>	<ul style="list-style-type: none"> <li>• Previous experience</li> <li>• Female</li> <li>• Lower socio-economic status</li> <li>• Lower educational level</li> </ul>	<ul style="list-style-type: none"> <li>• Older age</li> <li>• Race</li> <li>• Diabetes</li> <li>• Severe or intense symptoms</li> <li>• Being embarrassed</li> <li>• Heart attack at night</li> <li>• Consulting friends/family/colleagues</li> </ul>	<ul style="list-style-type: none"> <li>• Denial</li> <li>• Knowing of thrombolytic therapy and its effectiveness</li> <li>• Having insurance</li> <li>• Knowing the wide range of symptoms</li> <li>• Fearing consequence of seeking treatment</li> </ul>

# Heart Foundation Survey 2008



- Telephone survey of 3,176 people aged 30-65 years
- Fieldwork 21 July – 25 August 2008
- 17 minute questionnaire
- National sample stratified disproportionately by:
  - Geographic location – metro/regional in each state/territory
  - Age of respondent;
    - 30-44 years (n=639)
    - 45-65 years (n=2,537)

# Survey Findings

Barriers were grouped into 4 areas:

1. Hesitation or indecisiveness
2. Reluctance to involve an unfamiliar third party
3. Cost
4. Fatalistic attitude



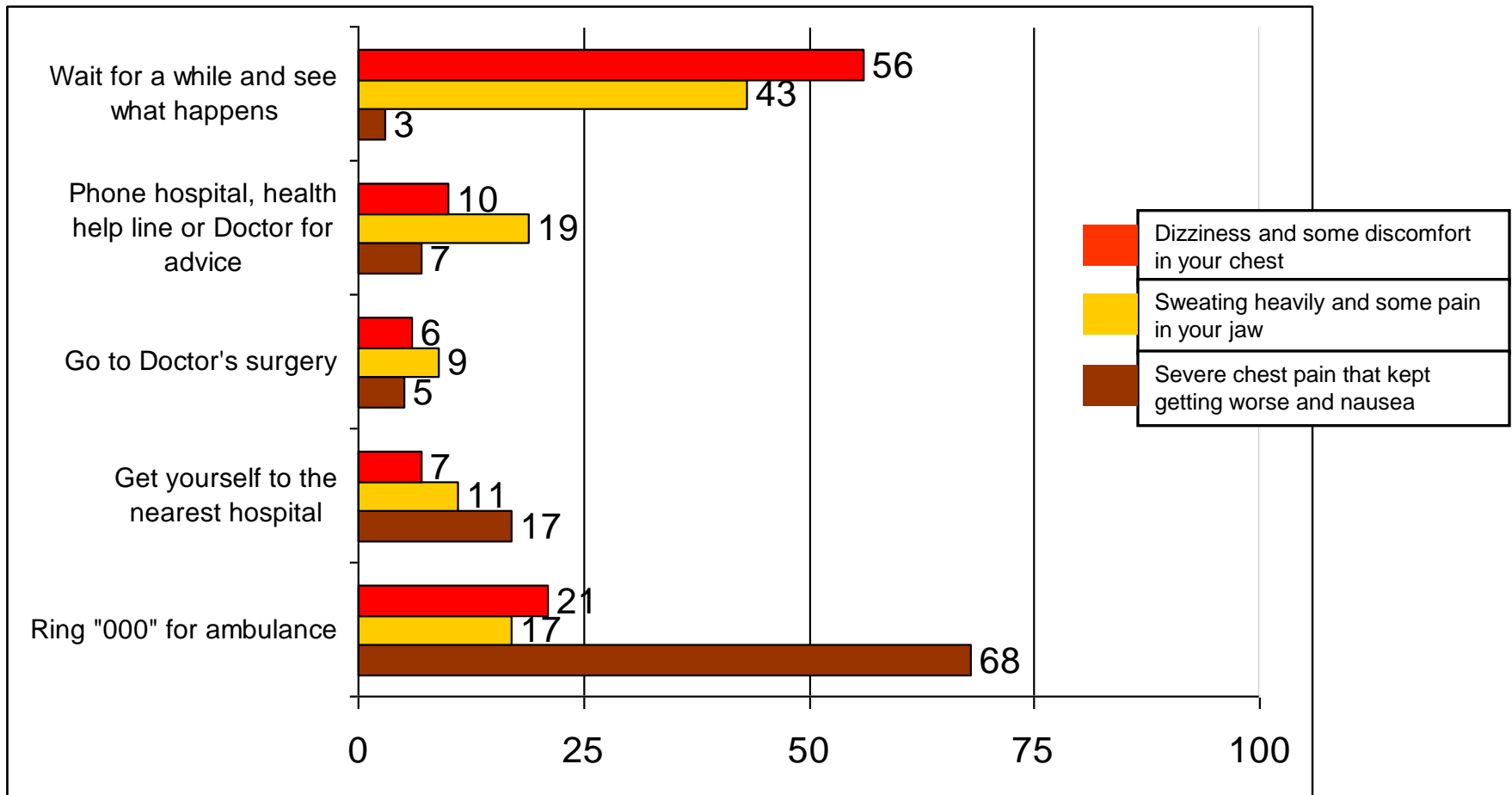
# Hesitation or indecisiveness



How important would the following be in making you delay calling 000?

Very/Somewhat Important	Total Sample	Women	Men	English	Another language	30-34 years	60-65 years
Want to be <b>sure</b> they are having a heart attack before calling 000	49%	52.4%	46%	49.3%	39.3%	57.7%	40.7%
<b>Wait</b> for an hour or so to see if the symptoms go away	41%	43.9%	37%	39.9	37.6%	50.9%	28.4%
Perceive themselves to be at <b>low risk</b>	39%	42.5%	35.7%	39.4%	37.5%	54.5%	20.5%
Feel <b>embarrassed</b> if it turned out they were not having a heart attack	31%	36.3%	25.9%	32%	23.1%	43.3%	17%

# Hesitation or indecisiveness 'Symptoms identification'



# Reluctance to involve an unfamiliar third party



How important would the following be in making you delay calling 000?

Very/Somewhat Important	Total Sample	Women	Men	English	Another language	30-34 years	60-65 years
Rather be <b>driven</b> to hospital	<b>27%</b>	<b>29.5%</b>	<b>24.9%</b>	<b>23.3%</b>	<b>31.6%</b>	<b>30.2%</b>	<b>19.7%</b>
Rather <b>contact own doctor</b> first	<b>15%</b>	<b>17.4%</b>	<b>13.1%</b>	<b>13.9%</b>	<b>16.4%</b>	<b>13.9%</b>	<b>9.4%</b>

# Ambulance cost

How important would the following be in making you delay calling 000?

Very/Somewhat Important	Total Sample	Women	Men	English	Another language	30-34 years	60-65 years
Using an ambulance too expensive	7%	7%	7%	3.4%	2.7%	3.4%	3.9%

# Fatalistic attitude

How important would the following be in making you delay calling 000?

Very/Somewhat Important	Total Sample	Women	Men	English	Another language	30-34 years	60-65 years
By the time the ambulance got to you it would be <b>too late</b>	<b>7%</b>	<b>7.1%</b>	<b>6.7%</b>	<b>6.3%</b>	<b>10.8%</b>	<b>10.3%</b>	<b>6.5%</b>
<b>Not much can</b> be done for you anyway	<b>5%</b>	<b>4.8%</b>	<b>5.7%</b>	<b>4.2%</b>	<b>10.8%</b>	<b>7%</b>	<b>4.9%</b>

# Survey Findings

- Our survey found that many factors need to be considered
  - “Wanting to be sure” is tricky due to the nature of Heart Attack symptoms
  - “Non Hollywood Heart Attacks” add doubt and delay
  - “Wait and see” is a real issue
  - Rather “be driven” or “consult a GP” is a factor in delay
  - Perceived “cost” of ambulance services is a problem
  - Fatalistic attitude not so critical
  - Perception of being “at risk” an issue

# Warning Signs of Heart Attack Strategy 2008-2012

- Social Marketing Campaigns:
  - Target Groups
    - CHD patients and families
    - Aboriginal and Torres Strait Islanders
  - General Population 45-65years
- Structural changes:
  - Ambulance Services
  - Primary Care
  - Data Collection Systems



# Social Marketing Strategies

## 1. Social marketing campaign targeting people with existing Coronary Heart Disease

- patient resources
- health professional resource

## 2. Social marketing campaign targeting men and women aged 45+ through mass media

- National campaign: piloted in Victoria and New South Wales
- Pilot on Gold Coast, 6 weeks (15 Feb – 28 March, 2010)
- Jointly funded by Heart Foundation and Queensland Government
- Queensland East Coast roll-out, 8 weeks 22 Aug 2010



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# Campaign objectives

- **Increase awareness**

- Assist people aged 45-64 to recognise that heart attack is a condition relevant to them
- Assist general population to re-appraise heart attacks in relation to their 45-64 year old loved ones

- **Increase understanding**

- That warning signs represent a life threatening emergency
- That symptoms of heart attack are varied and differ in severity

- **Improve knowledge**

- Of clear actions to take and instil permission to call 000

# Gold Coast pilot

- Stakeholder engagement
- Gold coast pilot 15 Feb – 28 March
- Data collected from Heart Foundation, Gold Coast Hospital, Queensland Ambulance Service and 13Health
- Emergency department presentations:
  - 30% patients with chest/heart related conditions presented within 2 hours
  - Close to one in four patients presented >12 hours
  - Median delay time 3-4 hours
  - 60% arrived by ambulance

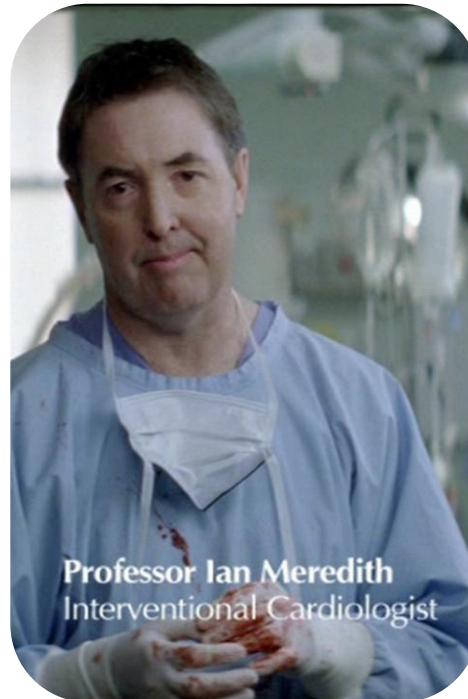
# Awareness, knowledge, attitude and intention key findings



Comparing those who had seen the campaign with those who hadn't:

- ◆ Greater awareness of warning signs of heart attack, their severity, and intention to call '000'
- ◆ More aware of warning signs (significant for arm pain, weak/heavy arm, jaw pain and back pain)
- ◆ More likely to rate them as severe
- ◆ More likely to say they would call 000 if they thought they were having a heart attack

# Campaign Advertisements



Professor Ian Meredith  
Interventional Cardiologist

**Radio –  
Ambulance  
operator  
example**

# For more information and questions

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