

## Appendix C Chest Pain – Guideline Question

### PICO Questions

	Questions	Population	Interventions	Comparisons	Outcomes
1	What are the education and information needs in adults presenting with chest pain to optimise their understanding of the diagnostic process and their participation in decisions about their investigations?	Adults presenting with chest pain/discomfort of suspected cardiac origin pending investigation/diagnosis	Education and information	No structured information and education	Optimal understanding and shared decision making
2	What is the incremental benefit and cost effectiveness of a clinical history, risk factors and physical examination in evaluation of individuals with acute chest pain of suspected cardiac origin?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Clinical history (descriptors of chest pain and associated symptoms) of people with acute chest pain	None	Discrimination or aid in discrimination between chest pain of cardiac origin (ACS and Angina) and non-cardiac origin for diagnosis
3	What is the diagnostic utility of pain relief with nitrates in the identification of patients with acute chest pain of cardiac origin?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Nitrates	None	Diagnosis of angina
4	Are the symptoms and description of the symptoms different in women presenting with acute chest pain of suspected cardiac origin compared with men?	Subgroups presenting with acute chest pain/discomfort of suspected cardiac origin	Clinical history (descriptors of chest pain and associated symptoms) of people with acute chest pain; women versus men	None	Discrimination or aid in discrimination between chest pain of cardiac origin (ACS) and non-cardiac origin for diagnosis
5	Are the symptoms and description of the symptoms different in Black and Ethnic Minorities presenting with acute chest pain of suspected cardiac	Subgroups presenting with acute chest pain/discomfort of suspected cardiac origin	Clinical history (descriptors of chest pain and associated symptoms) of people with acute chest pain; Black and Ethnic Minorities	None	

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	Questions	Population	Interventions	Comparisons	Outcomes
	origin compared with Caucasians?				
6	What is the utility (incremental value) and cost effectiveness of the resting ECG in evaluation of individuals with acute chest pain of suspected cardiac origin?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin.	Resting ECG	Not applicable	Refine the diagnostic likelihood of cardiac chest pain? or discrimination between chest pain of cardiac origin and non-cardiac origin for diagnosis?
7	What is the utility (incremental value) and cost effectiveness of a chest X ray in evaluation of individuals with chest pain of suspected cardiac origin?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Chest X ray	Not applicable	Refine the diagnostic likelihood of cardiac chest pain? or discrimination between chest pain of cardiac origin and non-cardiac origin for diagnosis?
8	Are the symptoms and description of the symptoms different in women presenting with acute chest pain of suspected cardiac origin compared with men?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Chest X ray	Not applicable	Refine the diagnostic likelihood of cardiac chest pain? or discrimination between chest pain of cardiac origin and non-cardiac origin for diagnosis?
9	In adults presenting with acute chest pain/discomfort of suspected cardiac origin, what is the clinical and cost effectiveness of giving oxygen compared with a placebo?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Oxygen	Placebo, no oxygen and other relevant comparators	Proposed outcomes: Adverse events Mortality Cardiovascular events (including vascular death, non fatal MI, non fatal stroke, recurrent ischaemia) symptoms
10	In adults presenting with acute chest pain, what is the clinical and cost effectiveness of pain management (e.g. sublingual and buccal nitrates, diamorphine, morphine with anti-emetic)	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Pain management (eg sublingual and buccal nitrates diamorphine, morphine with anti-emetic, tramindol)	Placebo and other relevant comparators, control, usual care, oxygen	Pain relief, adverse events, diagnosis of chest pain

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	compared with active comparators?				
11	In adults presenting with acute chest pain/discomfort of acute suspected cardiac origin, what is the clinical and cost effectiveness of anti-platelet therapy (aspirin, clopidogrel alone or in combination) compared with a placebo?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Anti-platelet therapy: Aspirin, clopidogrel, aspirin and clopidogrel combination	Placebo and other relevant comparators (including comparison to nothing, control, or alternative anti-platelet therapy)	Proposed outcomes: Adverse events Mortality Cardiovascular events (including vascular death, non fatal MI, non fatal stroke, recurrent ischaemia)
12	What is the utility and cost effectiveness of cardiac biomarkers in evaluation of individuals with acute chest pain of suspected cardiac origin?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	Biomarkers	None	Discrimination between chest pain of cardiac origin and non-cardiac origin for diagnosis
13	What is the diagnostic utility MSCT coronary angiography in the diagnosis of patients with acute chest pain of suspected cardiac origin?	Adults presenting with acute chest pain/discomfort of suspected cardiac origin	MSCT	Coronary angiography	
14	What is the incremental benefit and cost effectiveness of a clinical history, risk factors and physical examination in evaluation of individuals with stable chest pain of suspected cardiac origin?	Adults presenting with stable chest pain/discomfort of suspected cardiac origin	Clinical history (descriptors of chest pain and associated symptoms) of people whose pain is not acute (stable chest pain)	Not applicable	Discrimination or aid in discrimination between chest pain of cardiac origin (Angina) and non-cardiac origin for diagnosis
15	Are the symptoms and description of the symptoms different in women presenting with stable chest pain of suspected cardiac origin compared with men?	Subgroups presenting with stable chest pain/discomfort of suspected cardiac origin	Clinical history (descriptors of chest pain and associated symptoms) of people with stable chest pain; women versus men	Not applicable	
16	Are the symptoms and description of the symptoms	Subgroups presenting with stable chest pain/discomfort	Clinical history (descriptors of chest pain and associated symptoms) of	Not applicable	

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	Questions	Population	Interventions	Comparisons	Outcomes
	different in Black and Ethnic Minorities presenting with stable chest pain of suspected cardiac origin compared with Caucasians?	of suspected cardiac origin	people with stable chest pain; Black and Ethnic Minorities		
17	What is the utility (incremental value) and cost effectiveness of the resting ECG in evaluation of individuals with stable chest pain of suspected cardiac origin?	Adults presenting with stable chest pain/discomfort of suspected cardiac origin	Resting ECG	None	
18	What is the utility (incremental value) and cost effectiveness of a chest X ray in evaluation of individuals with stable chest pain of suspected cardiac origin?	Adults presenting with stable chest pain/discomfort of suspected cardiac origin	Chest X ray	Not applicable	Refine the diagnostic likelihood of cardiac chest pain? or discrimination between chest pain of cardiac origin and non-cardiac origin for diagnosis?
19	What is the diagnostic utility of calcium scoring for the evaluation of patients with stable chest pain of cardiac origin?	Adults presenting with stable chest pain/discomfort of suspected cardiac origin	Calcium scoring	Not applicable	
20	What is the diagnostic utility of non-invasive and invasive tests for the evaluation of patients with stable chest pain of suspected cardiac origin?	Adults presenting with stable chest pain/discomfort of suspected cardiac origin	Stress ECG, stress echocardiography, stress ECG versus myocardial perfusion scintigraphy using single photon emission computed tomography, stress magnetic resonance imaging, stress magnetic resonance perfusion imaging, MSCT	Coronary angiography	Diagnosis of angina