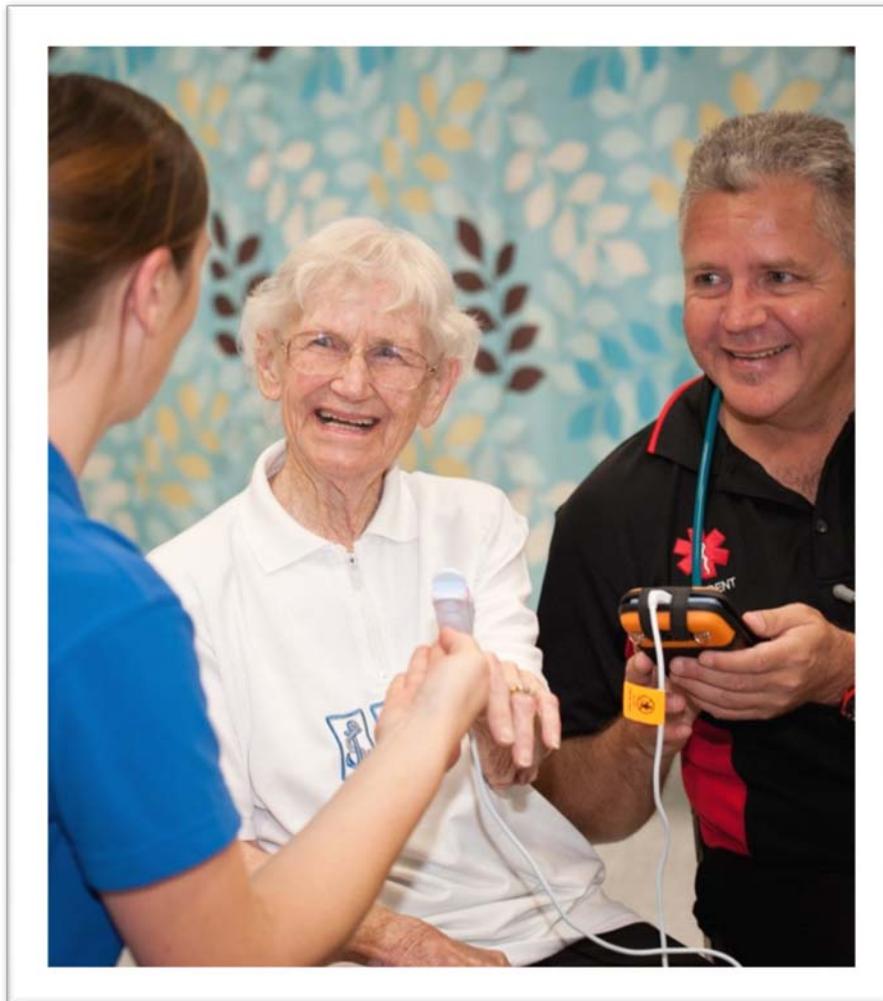


ASTHMA

An interprofessional Presentation



Facilitator Manual

THIS CLINICAL TRAINING INITIATIVE IS SUPPORTED BY FUNDING FROM THE AUSTRALIAN
GOVERNMENT UNDER THE INCREASED CLINICAL TRAINING CAPACITY (ICTC)
PROGRAM

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Acknowledgement

This resource has been developed by the Interprofessional Ambulatory Care (IpAC) Program at Edith Cowan University with funding from the Australian Government under the Increased Clinical Training Capacity (ICTC) Program.

The IpAC Program

ECU's IpAC Program was established with support from the Australian Federal Government through funding from the ICTC Program. The IpAC Program aims to deliver a world-class interprofessional learning environment and community clinic that develops collaborative practice among health professionals and optimises chronic disease self-management for clients.

This is achieved through the provision of clinical placements within the multidisciplinary team at the IpAC Unit, a community clinic that develops communication and collaboration among health professionals and optimises chronic disease self-management for clients. Additionally, a range of clinical placements are offered at existing health facilities, where trained IpAC Program clinical supervisors provide clinical support and ensure the integration of interprofessional learning into each clinical placement.

The IpAC Program has developed a variety of interprofessional learning resources, including interprofessional teaching resources and interprofessional learning through simulation resources. The interprofessional teaching resources consist each of a PowerPoint presentation and a facilitator manual. Each presentation focuses on a chronic health issue, and combines general information about this health issue with a case study and guided discussion around interprofessional learning themes.

The interprofessional learning through sequential simulation resources have been developed in collaboration with the ECU Health Simulation Centre. These learning resources are packages consisting of an audiovisual resource and a facilitator's manual, and aim to facilitate interprofessional learning and to support the participants in the development of interprofessional skills.

The interprofessional learning resources developed by the IpAC Program aim to provide health students and health professionals with the opportunity to learn with, from and about one another by engaging them in interactive tutorials.

Interprofessional Learning (IPL)

Interprofessional education occurs “*when two or more professions learn with, from and about each other in order to improve collaboration and quality of care*” (Centre for the Advancement of Interprofessional Education, 2002).

Interprofessional learning is “*the learning arising from interaction between students or members of two or more professions. This may be a product of interprofessional education or happen spontaneously in the workplace or in education settings*” (Freeth, Hammick, Reeves, Barr, & Koppel, 2005). It has been found that interprofessional education can improve collaborative practice, enhance delivery of services and have a positive impact on patient care (Canadian Interprofessional Health Collaborative (CIHC), 2008).

The World Health Organization (WHO) has recognised the importance of interprofessional education and collaborative practice in developing a health workforce that is able to meet the complex health challenges facing the world and assist in the achievement of the health-related Millennium Development Goals (World Health Organization, 2010). In developing its framework for action, the WHO have recognised that models of interprofessional collaboration are most effective when they consider the regional issues and priority areas (including areas of unmet need) in the local population (World Health Organization, 2010). In doing so, interprofessional education and collaborative practice can best maximise local health resources, reduce service duplication, advance coordinated and integrated patient care, ensure patient safety and increase health professional’s job satisfaction (World Health Organization, 2010).

The end goal of interprofessional education is to create a health workforce with improved levels of teamwork, collaboration, knowledge-sharing and problem-solving, eventually leading to better patient and client outcomes in health settings (Braithwaite et al., 2007).

How to use this resource

This is a teaching and learning resource designed to support tutors in the delivery of educational tutorial sessions to health students to enhance skills and knowledge of interprofessional care for clients with a chronic disease, which in this resource is asthma. The resource consists of two components: a PowerPoint presentation and a supporting manual.

The power point resource consists of three components:

1. Presentation which includes clinical information about asthma, the specific symptoms and management of the condition.
2. Case study about Mrs Joy with questions that can be explored through group work.
3. Exploration of the interprofessional learning objectives specific to this case study.

The presentation can be used independently, though this manual has been developed to support the delivery of the presentation in a tutorial. The tutorial includes both clinical and interprofessional

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learning objectives. The clinical information contained in the presentation is general information, not specifically related to the one profession, and would ensure a general basic knowledge of asthma across the disciplines represented in the student group.

Interprofessional learning objectives

The IpAC Unit has developed five key interprofessional learning objectives. The interprofessional case studies have been developed to support development in these five areas:

1. Role clarification
2. Team functioning and collaboration
3. Interprofessional communication
4. Client centred care
5. Reflective practice

Each learning objective consists of a set of skills, the development of which can be supported when using the interprofessional case studies.

1. Role clarification

Key phrases (skills which address this learning objective):

- Describes own discipline
- Describes other disciplines
- Verbalises skills, knowledge and competencies
- Understands responsibilities
- Identifies overlap between disciplines
- Values diversity between disciplines
- Works within scope of practice

2. Team functioning and collaboration

Key phrases (skills which address this learning objective):

- Participates in team activities
- Fosters positive relationships
- Appreciates differing personalities within teams
- Demonstrates respect and professional behaviour for different disciplines
- Awareness of role within the team

3. Client centred care

Key phrases (skills which address this learning objective):

- Provides appropriate evidence based information
- Establishes client centred goals
- Facilitates decision making with client/family
- Recognises and responds to the client's changing needs

4. Interprofessional communication

Key phrases (skills which address this learning objective):

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- Maintains client confidentiality
- Provides and delivers feedback
- Promotes the role of other disciplines to client/family
- Communicates in a clear and concise manner
- Validates the knowledge of other disciplines
- Uses and explains discipline specific terminology.

5. Reflective practice

Key phrases (skills which address this learning objective):

- Identifies how IPL impacts upon client outcomes
- Reflects on how IPL impacts own practice
- Identifies knowledge deficits and seeks clarification
- Reflects on feedback and integrates changes into practice
- Reflects on own attitudes and beliefs impacting upon practice.

Asthma Presentation

Asthma is defined as “a chronic inflammatory disorder of the airways that is characterised by recurrent episodes of wheezing, breathlessness, chest tightness, and coughing” (LeMone and Burke, 2000).

The presentation considers the contributing factors to the development of Asthma and the triggers, followed by a link to an online video showing ‘What happens during an Asthma flare up’. Treatment and management of the disease are explained, including a brief consideration of complementary medicine.

The presenter will need access to the internet to retrieve the online video. This video will take a moment to load, and takes 2 minutes to play. The video clip has been developed for a young audience and may cover some content students are already aware of.

Presentation slides

The presentation consists of 31 slides in total, below is a description of each slide.

1. Asthma: an interprofessional case study

2. Objectives: At the end of this presentation students will be able to:

- Provide a definition of asthma
- Discuss possible causes of asthma
- Identify triggers of asthma
- Describe symptoms of an asthma flare-up
- Describe treatment strategies
- Case study and Interprofessional care plan for an asthma sufferer

3. What is asthma?

Ask the students to list terms and definitions for asthma.

Definition is on next slide.

4. What is asthma?

Asthma affects over two million Australians and can start at any age, though it is more common in children. Lemone and Burke (2000) define asthma as a ‘chronic inflammatory disorder of the airway that is characterised by recurrent episodes of wheezing, breathlessness, chest tightness, and coughing’.

When you have asthma symptoms, the muscles in the airways tighten and the lining of the airways swell and produces sticky mucus. These changes cause the airways to become narrow, so that there is less space for the air to flow into and out of your lungs

The asthma foundation explains that people with asthma have sensitive airways in their lungs. When they are exposed to certain triggers their airways narrow, making it harder for them to breathe.

5. What causes asthma?

No-one really knows what causes asthma to develop, but we do know there are links to both genetics (family history) and the environment.

Three main factors cause the airways to narrow:

- The inside lining of the airways becomes red and swollen (inflammation)
- Extra mucus (sticky fluid) may be produced, which can block up airways
- Muscle around the airways tightens. This is called 'bronchoconstriction'

6 - 7. What are some of the factors contributing to the development of asthma?

- Genetic factors : having a parent with asthma, eczema or hay fever increases a child's risk of developing asthma
- Obesity increases the risk of developing asthma
- Asthma is more common in boys than girls. This may be due to young boys having smaller lungs than girls
- In adults, asthma is more common in women than men
- Smoking during pregnancy can damage a baby's lungs and lead to respiratory illness
- Children who with mothers smoke are four times more likely to wheeze
- Infants who are breast-fed are less likely to wheeze than those who have cow milk, soy milk or formula
- Children who are exposed to tobacco smoke have more chest infections
- Children who have respiratory infections when they are infants may be up to 40% more likely to develop asthma
- Indoor and outdoor air pollution may make asthma symptoms worse. It is not clear whether pollution *causes* asthma
- Modern diets may have contributed to the higher levels of asthma and allergy. This could be due to factors such as an increase in processed foods and polyunsaturated fatty acid (omega-6) from margarine and vegetable oil, and a reduction in antioxidants from fresh fruit and vegetables and lower levels of polyunsaturated fatty acid (omega-3) from oily fish
- Exposure to allergens may have an impact on whether you will develop asthma, but this is still unclear.
- Exposure to certain substances in the workplace can cause occupational asthma

8. Triggers for a flare up

Although at present there is no cure, with good management, people suffering from asthma can lead normal active lives. For good asthma management, it is important that people understand triggers of asthma as this can be different for everyone and then try to avoid or reduce exposure to these triggers.

Triggers include:

- Allergy triggers, e.g. house dust mites, pollens, pets or animals, feathers and moulds
- Cigarette smoke
- Viral infections, e.g. colds and flu
- Weather, e.g. cold air, change in temperature, thunderstorms, dust

- Work-related triggers, e.g. wood dust, chemicals, metal salts
- Some medicines

9. What happens during an asthma flare up?

To view a short online video showing what happens during an asthma flare up, access the link on the slide: <http://kidshealth.org/misc/movie/cc/how-asthma-affects.html>

The video will take a moment to load, and takes 2 minutes to play. The video has been developed for a young audience and may cover some content that students may already be aware of.

10. Peak flow meter

Accurate measurement of respiratory function is necessary to assess and manage asthma. Most adults and children over 7 years of age can perform spirometry. A peak flow test measures how fast a person can breathe out. This is also called your PEF: peak expiratory flow. A peak flow meter (a plastic tube with a mouthpiece that you blow into) is the device used to measure how hard and fast you breathe out. This test can be used to help diagnose asthma, to check your response to treatment, or to help you recognise when your asthma is getting worse.

Your peak flow needs to be measured regularly to be useful, and it's important to use the same device or 'meter' so that scores can be properly compared. Peak flow meters can be purchased from a local pharmacy.

How to use a peak flow meter:

1. Sit or stand upright.
2. Hold the meter so it is level and move the marker to the zero, or start point. Make sure fingers aren't blocking the movement of the marker.
3. Take a full deep breath in.
4. Put lips tightly around the mouthpiece then blow as hard and fast as you can for a few seconds.
5. Check where the marker has moved to for the score.
6. Repeat the steps above two more times to ensure the best possible score.
7. Record the highest score on the peak flow chart.

11. Treatment: Medication

Asthma is a treatable health condition. Although at present there is no cure, with good management, people with asthma can lead normal active lives. Depending on severity doctors may prescribe one or more types of medication.

In Australia, medications for asthma are divided primarily into 'relievers', 'preventers' and 'symptom controllers'. Most asthma medicines are delivered by an inhaler device, although some are available in tablet or liquid form. In hospitals, they may be given by intravenous infusion.

12. Treatment-Medication Types:

Relievers are fast acting medications that give quick relief of asthma symptoms (wheeze, cough, shortness of breath). Relievers are bronchodilators, which mean they relax the muscle around the outside of the airway, which opens the airway.

13. Treatment-Medication Types:

Preventer medications make the airways less sensitive, reduce redness and swelling and help to dry up mucus for up to 12 hours. Preventers need to be taken every day to reduce symptoms and asthma attacks, and it may take a few weeks before they reach their full effect. Inhaled corticosteroids are the most common of the preventer medications, and are anti-inflammatory medications.

14. Treatment- Medication Types:

Symptom controller medications (also called long-acting relievers) help relax the muscles around the airways. They are only prescribed for people with asthma who are already taking regular inhaled corticosteroid preventer medication and still have asthma symptoms. **Note:** They can actually make asthma worse if they are taken on their own without the regular corticosteroid preventer medication.

15. Simple changes to eliminate the symptoms

- Consider pets in the home
- Replace carpets with hard floors
- Anti-allergenic bedding
- Regular vacuuming / steam cleaning of mattresses and house hold furniture
- Consider diet
- Review medication regularly

Diet: Foods are not common triggers for asthma, but there is a strong link between asthma and allergies: many people with asthma also have allergies. Additionally, people who are obese are more likely to have asthma, to have more severe asthma, and to need more medication to control it. Research into the link between increasing levels of obesity and asthma has not clarified whether the obesity or the asthma is the causal factor. It is clear however that being obese increases the impact having asthma has on a patient.

16. Complementary therapies

Complementary therapies and associated treatments should only be used alongside prescribed medication. Complementary therapies are any medical or health care practices and products which are not part of 'standard' medical care and treatments offered by mainstream medicine.

When using complimentary therapies, the doctor needs to know about this, to ensure the best management of asthma.

- Herbal remedies – some potential agents for further research

- Breathing techniques – some studies have shown subjective improvement
- Relaxation techniques – evidence is inconclusive
- Acupuncture and hypnosis – no research evidence
- Homeopathy - research is inconclusive
- Dietary modification – supplements may offer benefit

17. Case study activity

To facilitate this exercise, divide the class into small groups. Using butcher's paper and marker pens, each group will look at the case study about Mrs Joy.

Have each group consider the three questions on the slide:

1. What health concerns can you identify with Mrs Joy?
2. What would a health professional consider when developing a care plan for this individual?
3. Consider how each discipline within the interprofessional health care team can help the individual to achieve their goals.

18-20. Case study

The case study is available in Attachment 1 of this manual as a handout. A BMI chart, including the formula to calculate BMI, has been included in Attachment 2 of this manual.

21. Question 1: What health concerns can you identify with Mrs Joy?

- Asthma - Potential allergies or intolerances including possibly food?
- Overweight
- High blood pressure
- Possible sleep apnoea
- Headaches and lower back pain – Musculoskeletal issues - Consider tight neck and shoulder muscles; bad posture; inappropriate office chair; muscle imbalances; poor gardening posture; inadequate overall body strength.

22. Question 2: What would a health professional consider when developing a care plan for this individual?

- Weight management : Developing an exercise program inclusive of dietary assessment
- Asthma management inclusive of triggers and medication review
- Pain management if required

23-27. Question 3: Consider how each discipline within the interprofessional health care team can help the individual to achieve their goals.

Ask the students to brainstorm about what discipline could be involved and how, before showing the possible health professionals described in the following slides.

- Doctor/Nurse
- Exercise Physiologist/Physiotherapist
- Dietitian
- Clinical Psychologist

28. Discuss ways that we can ensure that care is client centred?

Returning to the larger group, discuss the following questions in relation to IPL:

- Actively encourage client involvement in clinical decision making
- Respond to the changes in the client's needs
- Discuss with the client what care options are available
- Encourage self management, health promotion and disease prevention.

Follow this with a general discussion relating these skills to the case study.

29. How can we demonstrate effective communication with other members of the interprofessional team?

- Show respect and interest when listening to other team members' ideas and viewpoints and do not dominate discussions and activities
- Come to an agreed care plan
- Use terminology that is understood by members of the interprofessional care team and provide clarification when required.

Follow this with a general discussion relating these skills to the case study.

30. How does an interprofessional team differ from a multidisciplinary team?

- Identify where each health disciplines fits within this interprofessional team, acknowledging skills and knowledge of team members
- Consider where disciplines overlap so that duplication is avoided and where disciplines enhance others in the provision of health care
- Identify misconceptions relating to own and health professions listed in this case study
- Holistic client centred care: client is part of the decision making

Follow this with a general discussion relating these skills to the case study.

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Attachment: Case study Mrs Joy

Name: Mrs Joy
Age: 55 years
Employment: Full Time office administration

W: 83kgs
H: 174cm BMI: ?
BP: 132/93 RHR: 83 bpm
Fasting Glucose: 5.3 mmol/L Total Cholesterol: 2.3mmol/L

Exercise: Tries to go to the gym 3 times a week but find she gets very short of breath. She believes this is due to her low level of fitness and excess weight.

She tries to garden regularly, but finds she also gets very out of breath during this, even with minimal exercise. She also becomes quite congested and sometimes feels a bit faint.

Smoking: No

Drinking: A glass of red wine every night

Musculoskeletal: Mrs Joy often gets headaches and lower back pain, particularly after long working days.

Diet :

Breakfast: Full cream Greek Yoghurt with honey and mixed seeds.

Morning tea: 2 Anzac biscuits and packaged soup.

Lunch: Subway, usually has seafood or meatball sub on wheat bread.

Afternoon tea: Mixed nuts and dried fruit and a cup of milk with Nesquik.

Dinner: Seafood (shrimps or prawns) or chicken with frozen vegetables.

Desert: Packaged mousse or custard with choc covered macadamia nuts.

Other: Mrs Joy says she is always tired and lacking energy, even after an early night. She attributes this to stress in particular to strain from her relationship/marriage. Her husband complains of her heavy snoring.

Medications: Mrs Joy does not take any medications except her Ventolin inhaler when she absolutely needs it.

On further discussion, you find out she does have a history of asthma, which was particularly bad when she was a child, but she reports improvements in her condition since adolescence.

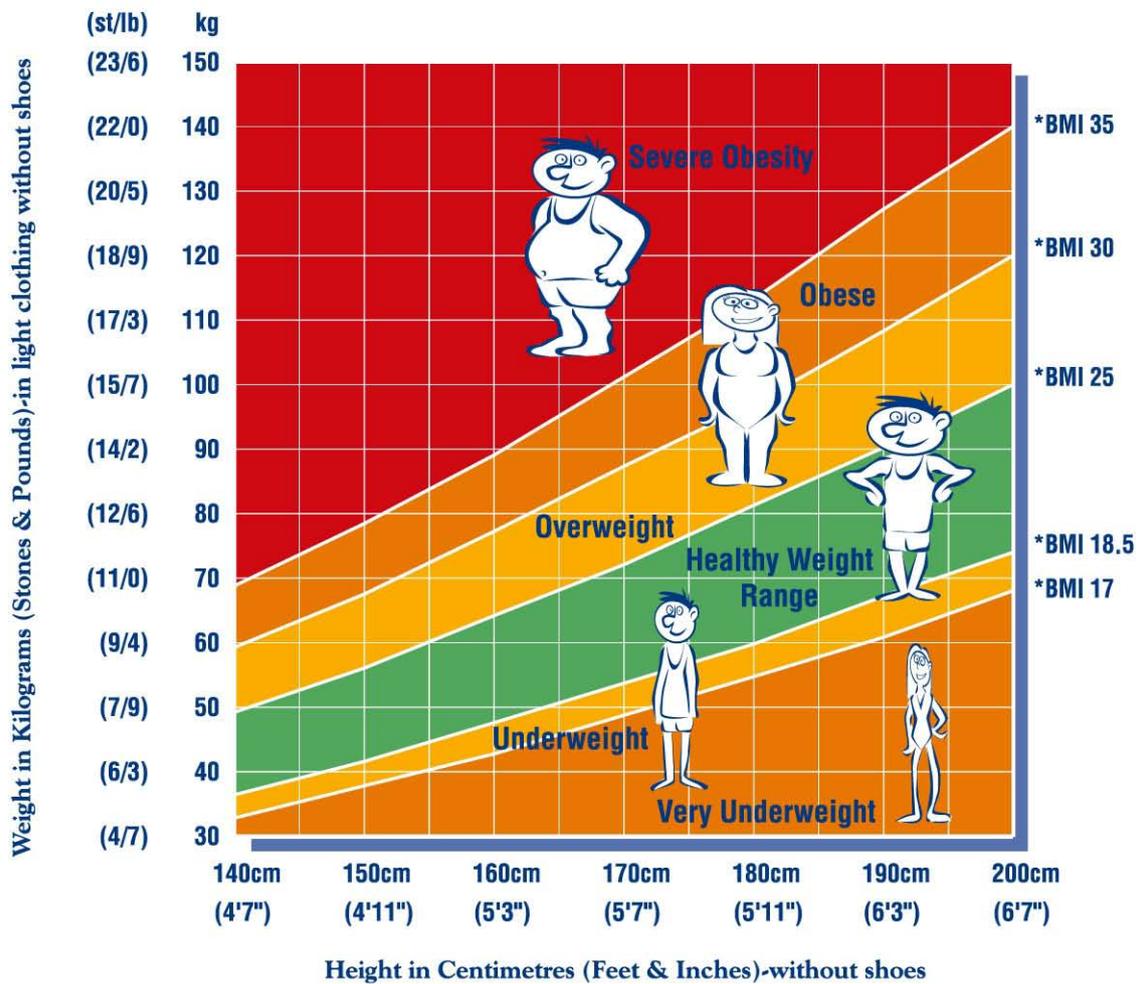
She only uses her Ventolin inhaler when she feels extremely out of breath (usually with exercise) and very rarely uses her preventor, she it last when she had an attack last year, which she says is because she saw an article on Wikipedia about the dangers of regular Ventolin use.

She doesn't otherwise believe her asthma is a problem, although admits she has never really known much about it.

Attachment: Body Mass Index Chart

AIM FOR A HEALTHY WEIGHT

Weight for Height Chart for Men and Women Aged 18-64



* Body Mass Index (BMI) = $\frac{\text{Weight (kg)}}{\text{Height}^2 \text{ (metres)}}$



Based on WHO data and the NHMRC Clinical Practice Guidelines for the Management of Overweight and Obesity 2003.
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