

*Focussed on the Future*

DIVISIONS OF GENERAL PRACTICE NETWORK

Forum**2003**

BRISBANE CONVENTION AND EXHIBITION CENTRE 20-23 November 2003

# A walkthrough the Integrated Care Program Phase 2 Electronic Decision Support Program



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Summary
Risk Factors
Severity
Control
Pattern
Medication
Lung Function
Triggers
Action Plan
Educate and Review
Education Leaflets
Exit
<b>Recommended</b>
Review Risk Factors
Review Severity
Review Pattern
Review Lung Function
Review Triggers
Review Medication
Review Action Plan
Review Understanding Asthma
Review Understanding Medication

LEVELS OF DECISION SUPPORT					
SETTING	NUMBER	L1	L2	L3	L4
PRIMARY CARE	14	4	9	2	
HOSPITAL	10	4	4		1
COMMUNITY	1	1			
HOSPITAL PHARMACY	0				
COMMUNITY PHARMACY	2	1	1		
PATHOLOGY	2				2
MULTIPLE	6	5	1		
<b>TOTALS</b>	<b>35</b>	<b>15</b>	<b>15</b>		<b>3</b>
<b>TOTAL %</b>		<b>43</b>	<b>43</b>		<b>9</b>

**WHERE DOES ICP PHASE 2 FIT ?**

***Electronic Decision Support for Australia's Health Sector. National Electronic Decision support taskforce. November 2002 Appendix A p43***



ICP

ICP

Summary
Risk Factors
Severity
Control
Pattern
Medication
Lung Function
Triggers
Action Plan
Educate and Review
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# Decision Support Type 3 (=Level 3)

*Uses deductive inference engines to operate on a specific knowledge base and automatically generates diagnostic or intervention recommendations based on changing patient clinical condition, with the knowledge and inference engines stored in the knowledge base*

**Electronic Decision Support for Australia's Health Sector. National Electronic Decision support taskforce. November 2002 p24**



ICP

ICP

- Summary
- Risk Factors
- Severity
- Control
- Pattern
- Medication
- Lung Function
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit
- Recommended**
  - Review Risk Factors
  - Review Severity
  - Review Pattern
  - Review Lung Function
  - Review Triggers
  - Review Medication
  - Review Action Plan
  - Review Understanding Asthma
  - Review Understanding Medication

# ASTHMA DECISION SUPPORT SYSTEM USING THE GENERIC FRAMEWORK



THE VENDOR  
**VENDOR 2**  
CONTRIBUTED DATA  
VIA AN HL7 MESSAGE FROM  
WITHIN APPLICATION

**VENDOR 1**  
ACCESSED DATA  
USING AN EXTRACTION  
TOOL AND THEN CREATING  
THE HL7 MESSAGE

**TWO WAY**

**ONE WAY**



**GP CLINICAL  
DESKTOP  
Plexus**



**GP CLINICAL  
DESKTOP  
Medical Director**



Sid JAMES  
1 The Street, Melbourne Vic 3000  
Allergies:  
Alerts: None Recorded

DOB: 08/08/1958 - Age: 45 Yrs 1 Mth - Male

Record Privacy: All Users / All Sites  
Use of Information Consent: Not Granted

Close  
Selector

# MEDICAL SPECTRUM - PLEXUS EXAMPLE

Current Consultation  
History

Friday 19/09/2003 05:04:36 PM - Dr Mary Abercromby-Smith  
Consultation Not Coded

Consultation Conditions  
Consultation Not Coded

Font Style Font Size B I U [List Icons] Fg Bg

REQUEST THE APPROPRIATE  
ELECTRONIC DECISION  
SUPPORT REQUIRED

Activities  
Script  
Pathology  
Radiology  
Other Investigation  
Outward Correspondence

Consultation Tools  
Height / Weight  
Blood Pressure  
Diabetes Review  
Respiratory Function  
Other Statistics  
Asthma Decision Support

Detail (Default)

- All Consultations
- Progress Notes (Recent)
- Progress Notes (All)

Health Summary Views Example Six (Default)

Allergy History   
Not Recorded

Current Conditions

Current Medication

Documents

Immunisations

Reminders and Recalls



# Asthma Summary

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

Has the client given written consent to release ICP Asthma

**AGREEMENT TO PARTICIPATE**

Should the client be treated as an adult for the purposes of Asthma assessment?

 Yes  No

Asthma 3+ Plan	<b>Not Met</b> (no severity assessment in current cycle)	Generate Report
Past Visits	12 visits total. 1 visits in current cycle.	
Risk Factors	<b>Emergency Department/Hospital Visit (22/11/2003)</b> <b>Life Threatening Attack (22/11/2003)</b>	
Severity	<b>Severe Asthma (28/10/2003)</b>	History
Pattern / Control	Sub-optimal Control (C)	Pattern History
		Control History
Lung Function	FEV1(Pre) 2 litres (23/09/2003) FVC (Pre) 4 litres (23/09/2003) Best Peak Flow 700 litres (22/11/2003)	FEV1 History
		FVC History
Triggers	Last Reviewed (05/11/2003)	Summary
Medication	Last Reviewed (05/11/2003)	Summary
Action Plan	Last Generated (21/11/2003)	
Education & Review	Last Reviewed (05/11/2003)	Summary

Continue Visit    Next Visit    New Cycle

Visit History: 12 total, 1 in current cycle.

12. (1)	22/11/2003 13:10:14	DR. NEVILLE WALKER	Open
11. (8)	22/11/2003 13:09:53	DR. NEVILLE WALKER	Open
10. (7)	22/11/2003 12:53:50	DR. NEVILLE WALKER	Open
9. (6)	22/11/2003 11:06:11	DR. NEVILLE WALKER	Open
8. (5)	22/11/2003 13:11:06	DR. NEVILLE WALKER	Open
7. (4)	22/11/2003 11:31:46	DR. NEVILLE WALKER	Open
6. (3)	22/10/2003 17:47:15	DR. NEVILLE WALKER	Open
5. (2)	22/10/2003 17:46:2	DR. NEVILLE WALKER	Open
4. (1)	22/10/2003 17:06:1	DR. NEVILLE WALKER	Open
3. (3)	22/10/2003 17:05:14	DR. NEVILLE WALKER	Open
2. (2)	22/10/2003 17:03:09	DR. NEVILLE WALKER	Open
1. (1)	22/10/2003 12:16:40	DR. NEVILLE WALKER	Open

**HIGHLIGHTS**

**LET'S CLICK HISTORY**

**SUMMARYBUTTONS**


**PREVIOUS VISITS**

**IS THIS CLIENT AN ADULT AS DETERMINED BY HIS CAPACITY TO MEASURE HIS OWN PEAK FLOW PROPERLY?**

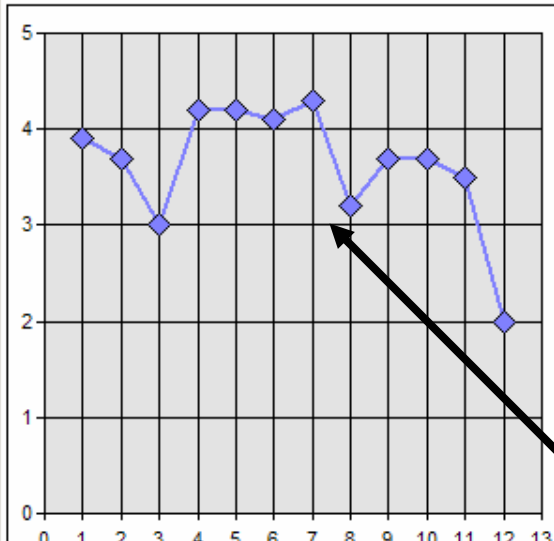
## Asthma Summary

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

Has the client given written consent to release ICP Asthma Data?

Should the client  History -- Web Page Dialog

## FEV1 (Pre)



Date	FEV1 (Pre)
29/08/2003	3.9
29/08/2003	3.7
29/08/2003	3
29/08/2003	4.2
10/06/2003	4.2
30/08/2003	4.1
30/08/2003	4.3
23/09/2003	3.2
23/09/2003	3.7
23/09/2003	3.7
23/09/2003	3.5
23/09/2003	2

**HISTORY BUTTON POPS UP THIS SCREEN TO CONVENIENTLY PROVIDE A QUICK REVIEW FOR THE CLINICIAN**

Asthma 3+ Pla

Past Visits

Risk Factors

Severity

Pattern / Contr

Lung Function

Triggers

Last Reviewed (05/11/2003)

Medication

Last Reviewed (05/11/2003)

Action Plan

Last Generated (21/11/2003)

Education & Review

Last Reviewed (05/11/2003)

Summary

View Cycle

Open

Open

Open

Open

Open

Open

Open

Open

Open

Open

Open

Open


2003 17:03:09 DR. NEVILLE WALKER

2003 12:16:40 DR. NEVILLE WALKER

## Asthma Summary

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

Has the client given written consent to release ICP Asthma Data?

Should the client  History -- Web Page Dialog

### Current Triggers

	Date	Current Triggers	
Do you Smoke?	22/11/2003	Yes	
Does Smoking Trigger your asthma?		No Answer	
When others smoke near you?		No Answer	
Infections	22/11/2003	Yes	
Allergens	22/11/2003	Yes	
Exercise		No Answer	
Drugs	22/11/2003	Yes	NSAIDS
Emotion		No Answer	
Food Allergy or Intolerance		No Answer	
Gastro-oesophageal reflux		No Answer	
Irritants		No Answer	
Occupational factors		No Answer	
Temperature and Weather Changes		No Answer	

**AND THEN THE TRIGGERS  
THAT HAVE BEEN  
PREVIOUSLY IDENTIFIED  
FOR ASTHMA ATTACK FOR  
THIS CLIENT**

Asthma 3+ Plan

Past Visits

Risk Factors

Severity

Pattern / Control

Lung Function

Triggers

Last Reviewed (22/11/2003)

Medication

Last Reviewed (05/11/2003)

Action Plan

Last Generated (21/11/2003)

Education  
& Review

Last Reviewed (05/11/2003)

New Cycle

Open

Open

Open

Open

Open

Open

Open

Open

Open

Open

Open

Open

2. (2) 28/10/2003 17:03:09 DR. NEVILLE WALKER

1. (1) 27/10/2003 12:16:40 DR. NEVILLE WALKER

# Asthma Summary

New visit

- Asthma 3+ Plan**
- Summary
- Risk Factors
- Severity
- Control
- Medication
- Lung Function
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit

MR JAMES, SID (DOB: 08/08/1958, M)  
 1 THE STREET, MELBOURNE 3000

**OR BY A BEST PRACTICE PATHWAY IF REQUIRED**

Next>

Current visit count in cycle.	9
Has the client given written consent to release ICP Asthma Data?	<input checked="" type="checkbox"/> Consented
Should the client be treated as an adult for the purposes of Asthma assessment?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Age (years)	45
Height (m)	1.8
Weight (kg)	

Asthma 3+ Plan	Met. (05/11/2003)	<a href="#">Generate Report</a>
Risk Factors	<b>Emergency Department/Hospital Visit (22/11/2003)</b> <b>Life Threatening Attack (22/11/2003)</b>	
Severity	<b>Severe Asthma (28/10/2003)</b>	<a href="#">History</a>
Control	<b>Sub-optimal Control (05/11/2003)</b>	<a href="#">Pattern History</a>
Lung Function	FEV1(Pre) 2 litres (23/09/2003) FVC (Pre) 4 litres (23/09/2003) ) litres (22/11/2003)	<a href="#">Control History</a> <a href="#">FEV1 History</a> <a href="#">FVC History</a>
Triggers	11/2003)	<a href="#">Summary</a>
Medication	Last Reviewed (05/11/2003)	<a href="#">Summary</a>
Action Plan	Last Generated (21/11/2003)	
Education & Review	Last Reviewed (05/11/2003)	<a href="#">Summary</a>

**NAVIGATING THROUGH THE CRG BY MENU**

**RECOMMENDED ACTIVITIES THIS VISIT**

- Recommendations
- Review Control
- Review Lung Function
- Review Medication
- Review Action Plan
- View Medication Guidance**

**NOT COMPLETED - LAST VISIT**

**AND EACH SCREEN HAS A TITLE AND THE TYPE OF VISIT**

- Asthma 3+ Plan**
- Summary
- Risk Factors**
- Severity
- Control
- Medication
- Lung Function
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit

# Asthma Risk Factors

New visit

[<Back](#) [Next>](#)

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

Have the risk factors been reviewed?  Reviewed

Have you been admitted to hospital or attended an emergency room because of your asthma in the past year?  Yes  No

Have you had any previous life threatening asthma attacks? (ICU or ventilator)  Yes  No

### Dates of Visits to Emergency Department or Admission to Hospital

04/11/2003

### Dates of life threatening attacks (ICU or ventilator)

05/11/2003

**ANSWERING YES TO EITHER OR BOTH OF THESE QUESTIONS INCREASES THE ASTHMA SEVERITY RATING FOR THIS CLIENT AUTOMATICALLY**

**AS WILL DATES RECORDED FOR HOSPITAL VISITS OVER HERE**

- Recommended**
- Review Control
- Review Lung Function
- Review Medication
- Review Action Plan
- View Medication Guidance

- Asthma 3+ Plan**
- Summary
- Risk Factors
- Severity**
- Control
- Medication
- Lung Function
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit

# Asthma Severity

New visit

[<Back](#)   [Next>](#)

**MR JAMES, SID (DOB: 08/08/1958, M)**  
**1 THE STREET, MELBOURNE 3000**

### Reference Material

Step 1: Assess severity of Asthma  
 Evidence for Step 1  
 Identification of the High Risk Patient taken from the 2002 NAC Handbook  
 Peak Flow  
 Website: National Asthma Council (Step 1)

- Recommended**
- Review Control
- Review Lung Function
- Review Medication
- Review Action Plan
- View Medication Guidance**

How often do you wake at night with wheeze or cough?

- Every day
- Never
- < 1 per week
- > 1 per week

Do you ever wake up with asthma in the morning?

- Never
- < 1 per week
- > 1 per week

How often do you use your reliever medication?

- Less than twice a week
- Most days
- 3-4 times per day

What is the medication (adults) usually required for optimal control of symptoms?

- Low Dose
- Medium dose
- High dose

What is \_\_\_\_\_?

- > 90% of best
- Between 80%-90% of best
- < 80% of best

What is \_\_\_\_\_?

- > 80%
- Between 60%-80%
- < 60%

**ASTHMA SEVERITY SCORE IS CALCULATED ON THE RISK FACTORS AND THE ANSWERS TO THE FIRST FIVE QUESTIONS OF THIS SCREEN**

**SEVERITY RATING**

Asthma severity level is:

Severe

**AND INFORMATION SUPPORT FOR THE CLINICIAN OR CLIENT IS AT HAND VIA REFERENCE AND EDUCATIONAL MATERIALS**

**Asthma Control**  
New visit

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

<Back Next>

**Asthma 3+ Plan**

Summary

Risk Factors

Severity

Control

Medication

Lung Function

Triggers

Action Plan

Educate and Review

Education Leaflets

Exit

**Reference Material**

Assessing Asthma Control  
Maintenance Medication for Adults  
Maintenance Medication for Children  
Medical History Checklist

**Respiratory Function Tables**

Respiratory Function Tables - Male  
Respiratory Function Tables - Female  
Respiratory Function Tables - Child - Girls  
Respiratory Function Tables - Child - Boys

**Education Material**

Maintenance Medication for Adults  
Maintenance Medication for Children  
Under 5's and asthma  
Asthma in the over 50's  
Asthma in the under 5's  
Babies and asthma

Shortness of breath or cough?

Most days

Never

On average during the past week how often did you wake at night with wheeze or cough?

Infrequent - only with RTI

More than once a week

On average during the past week did you ever wake up with asthma in the morning?

Never

Usually not except with RTI

Once a week

On average during the past week how often do you use your reliever medication?

Infrequently

2-3 times per week

> 3 times per week

On average since your last visit how much work/school has been missed due to asthma? (timeframe)

None

Occasionally (< 1 day per week)

> 1 day per week

Have you had a flare up of your asthma since your last visit?

Yes  No

Increase Use of SABA

Increase use of inhaled steroid

Oral steroid

Referred to your action plan

Admitted to hospital or the ED

Hospital Visit Date

Sub-Optimal

**THE FIRST FIVE QUESTIONS  
HERE GENERATE AN ASTHMA  
CONTROL ASSESSMENT**



- Asthma 3+ Plan**
- Summary
- Risk Factors
- Severity
- Control
- Medication**
- Lung Function
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit

**Medication**  
New visit

**AND INFORMATION SUPPORT WITH RESPECT TO MEDICATION MANAGEMENT IS NOW AT HAND – AGAIN TO SUPPORT THE CLINICIAN OR THE CLIENT**

**Reference Material**

Step 4 - Maintain Best Lung Function - Optimise Medication  
 Evidence for Step 4  
 Maintenance Medication for Adults  
 Maintenance Medication for Children  
 Website: National Asthma Council (Step 2)

**Education Material**

Other medications and asthma  
 Anaesthetics and asthma  
 Aspirin and NSAID analgesics

Has current medication has been reviewed for this patient?  Reviewed

FEV1 is less than 80% of FEV1 predicted consider treatment regime:

- 500 mcg/day of fluticasone propionate (FP) or budesonide
- Up to 800 mcg/day of beclomethasone dipropionate (BDP) or budesonide

**AND IF THE FEV1 IS <80% THIS WARNING WILL BE DISPLAYED**

**Current Medication**

- 29/08/2003 QVAR 100 INHALER, 100mcg/dose, 1 puff b.d. m.d.u., 1\*200 dose
- 29/08/2003 EFORMOTEROL FUMARATE DIHYDRATE CAPSULE, 12mcg, 12mg b.d. m.d.u., 60
- 29/08/2003 SALBUTAMOL SULFATE INHALER, 100mcg/dose, 2 puff p.r.n., 2\*200 dose
- 29/08/2003 PREDNISOLONE TABLET, 25mg, 50mg b.d., 14
- 28/10/2003 PARACETAMOL SUSPENSION, 120mg/5mL, 3 daily p.r.n., 100mL

- Recommended**
- Review Control
- Review Lung Function
- Review Medication
- Review Action Plan
- View Medication Guidance**

**Medication** [X]

Any changes to medication may need to be reflected in the Asthma Action Plan

OK

**NOW WE CAN REVIEW THE MEDICATION – THIS INFORMATION COMES DIRECTLY FROM THE DESKTOP PRESCRIBING SYSTEM**

- Asthma 3+ Plan**
- Summary
- Risk Factors
- Severity
- Control
- Medication
- Lung Function**
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit

**MORE CONTEXT SENSITIVE INFO HERE**

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

Function  
New visit

<Back    Next>

**Reference Material**

Spirometry  
Peak Flow

**Respiratory Function Tables**

Respiratory Function Tables - Male  
Respiratory Function Tables - Female  
Respiratory Function Tables - Child - Girls  
Respiratory Function Tables - Child - Boys

**Education Material**

Peak flow meters what is your score?

Has the lung function data been reviewed?  Reviewed

Age (years): 45      Height (m): 1.8

Forced Spirometry	Predicted	Pre BD	%Predicted	Post BD	%Predicted	%Var
FEV1 [l]	3.94	2	50	2	50	0
FVC [l]	4.03	4	81	5	81	25
FEV1 % FVC [%]		50		40		
PEF [l/min]		400	71	450	80	13

Observation date information

Peak Flow Best: 700 (Override existing Best Peak Flow)

**THESE LUNG FUNCTION TEST RESULTS ARE AGAIN PULLED ACROSS FROM THE CLINICAL DESKTOP**

- Up to 800 mcg/day of beclomethasone dipropionate (BDP) or budesonide (BUD)(CFC)

- Recommended**
- Review Control
- Review Action Plan
- View Medication Guidance

**AND IF THE CLIENT HAS RECORDED A BETTER PEAK FLOW SINCE LAST VISIT WE CAN RECORD THIS DIRECTLY HERE**

## Asthma 3+ Plan

Summary

Risk Factors

Severity

Control

Medication

Lung Function

Triggers

Action Plan

Educate and Review

Education Leaflets

Exit

## Lung Function

New visit

&lt;Back

Next&gt;

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

## Reference Material

Spirometry  
Peak Flow

## Respiratory Function Tables

Respiratory Function Tables - Male  
Respiratory Function Tables - Female  
Respiratory Function Tables - Child - Girls  
Respiratory Function Tables - Child - Boys

## Education Material

Peak flow meters what is your score?

Has the lung function data been reviewed?

 Reviewed

Age (years): 45

Height (m): 1.8

Forced Spirometry	Predicted	Pre BD	%Predicted	Post BD	%Predicted	%Var
FEV1 [l]	3.94	2	50	2	50	0
FVC [l]	4.93	4	81	5	81	25
FEV1 % FVC [%]	81	50		40		
PEF [l/min]	561	400	71	450	80	13

Observation date information

FEV1 Pre: 23/09/2003  
FEV1 Post: 23/09/2003  
FVC Pre: 23/09/2003  
FVC Post: 23/09/2003  
Peak Flow Pre: 23/09/2003  
Peak Flow Post: 23/09/2003

700

(Override existing Best Peak Flow)

700

Peak Flow Best:

57

FEV1 predicted consider treatment regime:

- 500 µg/day of fluticasone propionate (FP) or budesonide (BUD)-HFA) or;
- Up to 1000 µg/day of beclomethasone dipropionate (BDP) or budesonide (BUD)(CFC)

**AND HOVERING OVER THIS  
QUESTION MARK WILL  
DISPLAY PAST OBSERVATION  
DATES**

# WHEN WE GET TO ASTHMA TRIGGERS THE GUIDELINE IS VERY RICH WITH REFERENCE MATERIAL

- Asthma 3+ Plan
- Summary
- Risk Factors
- Severity
- Control
- Medication
- Lung Function
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

Asthma Triggers  
New visit

<Back Next>

Hide References

Reference Material	Allergens	Exercise
Website: National Asthma Council (Step 3) Step 3: Maintain Best Lung Function - Triggers Evidence for Step 3 Table of triggers, fact and information sheets	Allegry and asthma House dust mites Pets and asthma	Asthma and exercise Coaches brochure Being active brochure Sports, drugs and asthma
Drugs	Food Allergy	Occupational
Other medications and asthma Anaesthetics and asthma Aspirin and NSAID analgesics Salicylates and asthma	Food and asthma MSG and asthma Royal Jelly	Asthma in the workplace Occupational asthma Farming and asthma
Irritants	Temperature	Other important Topics
Air pollution and asthma Wood smoke and asthma Asthma and smoking Farming and	Weather changes and asthma Heating and cooling devices	Pregnancy and asthma Asthma at School (for school) First Aid kit and cleaning of Buteyko Complementary therapies and Regional Differences

**QUESTIONNAIRE TO COLLECT INFORMATION ABOUT THE CLIENT SPECIFIC ASTHMA TRIGGERS**

**FREE TEXT TO FURTHER DESCRIBE THE TRIGGER HERE**

Has current asthma triggers been reviewed for this patient?  Reviewed

Do you Smoke?  Yes  No Comment

Does Smoking Trigger your asthma?  Yes  No Comment

When others smoke near you?  Yes  No Comment

Infections  Yes  No Comment

Allergens  Yes  No Comment

Exercise  Yes  No Comment

Drugs  Yes  No Comment

Gastro-oesophageal reflux  Yes  No Comment



**REDUNDANT QUESTIONS ARE "GREYED OUT"**

## Asthma 3+ Plan

Summary

Risk Factors

Severity

Control

Medication

Lung Function

Triggers

Action Plan

Educate and  
Review

Education Leaflets

Exit

Recommended  
Review Control  
Review Action Plan  
View Medication  
Guidance

# Asthma Triggers

New visit

MR JAMES, SID (DOB: 08/08/1958, M)

&lt;Back

Next&gt;

Printing -- Web Page Dialog

Print

Copy

Back

 Portrait
  Landscape

## Aspirin & NSAID Analgesics

This information sheet is for people with asthma and carers of children with asthma. It informs of the risks associated with taking aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) by people with asthma and how to avoid these risks.

People with asthma are advised to use caution when taking products containing non-steroidal anti-inflammatory agents, such as aspirin and other related compounds as some 10-15% of people may experience an adverse reaction. In some individuals, aspirin may trigger symptoms resulting in wheezing or difficulty in breathing. Extreme cases may result in worsening of symptoms and a potentially life threatening attack.

### What products might affect asthma?

Allergens	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Comment	
Exercise	<input type="radio"/> Yes	<input type="radio"/> No	Comment	
Drugs	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Comment	NSAIDS
Emotion	<input type="radio"/> Yes	<input type="radio"/> No	Comment	
Food Allergy or Intolerance	<input type="radio"/> Yes	<input type="radio"/> No	Comment	
Gastro-oesophageal reflux	<input type="radio"/> Yes	<input type="radio"/> No	Comment	

Devices in schools

ma

## Asthma 3+ Plan

Summary

Risk Factors

Severity

Control

Medication

Lung Function

Triggers

Action Plan

Educate and  
Review

Education Leaflets

Exit

Recommended

Review Control

Review Action Plan

View Medication  
Guidance

## Asthma Triggers

New visit

MR JAMES, SID (DOB: 08/08/1958, M)

&lt;Back

Next&gt;

Printing -- Web Page Dialog

Print Copy Back

Portrait  Landscape

# Allergy and Asthma

This information sheet outlines the process by which an asthma attack can be triggered by an allergic reaction.

An individual can be exposed to a substance and over a period of time can become sensitised to it and future exposure will trigger an allergic reaction. This could be in the form of eczema, hives, hay fever, a runny nose or an asthma attack.

An allergen is a substance that generates an allergic reaction. There are a number of different allergens that can trigger asthma in different people. In asthma they are usually inhaled but may be swallowed, injected or applied to the skin.

Sometimes more than one part of the body can be affected at one time. This is why many people with asthma also experience hayfever and eczema.

Allergens include:

Allergens	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Comment	
Exercise	<input type="radio"/> Yes	<input type="radio"/> No	Comment	
Drugs	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Comment	NSAIDS
Emotion	<input type="radio"/> Yes	<input type="radio"/> No	Comment	
Food Allergy or Intolerance	<input type="radio"/> Yes	<input type="radio"/> No	Comment	
Gastro-oesophageal reflux	<input type="radio"/> Yes	<input type="radio"/> No	Comment	

Devices in schools

ma

- Summary
- Risk Factors
- Severity
- Control
- Medication
- Lung Function
- Triggers
- Action Plan
- Educate and Review
- Education Leaflets
- Exit

JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

**A KEY OBJECTIVE IS TO COLLABORATE WITH THE CLIENT AND BUILD THE ASTHMA ACTION PLAN**

**Education Material**  
Management and action plans

Has the action plan from the previous consult been reviewed for this patient?  Reviewed

Generated or printed today?

[Generate Plan](#)

**ASTHMA ACTION PLAN WITH TANGIBLE TARGETS FOR THE CLIENT**

Name: JAMES, SID Date plan prepared: 29/08/2003  
 Doctor's Name: DR. NEVILLE WALKER

**YOUR BEST PEAK FLOW IS: 550 l/min**

**When your PEAK FLOW is Above 80% (440 l/min)**

- You will normally,
- Be free of regular night time wheeze or cough or chest tightness
  - Have no regular wheeze, cough, chest tightness on waking or during the day
  - Be able to take part in normal physical activity without asthma symptoms
  - Need your reliever less than 3-4 times a week (except if used for exercise)

Your asthma is GOOD

Continue your normal treatment:  
 Reliever Medication:  
 [Add](#)  
 SALBUTAMOL SULFATE INHALER,  
 100mcg/dose, 2 puff p.r.n., 2\*200 dose

Preventer Medication:  
 [Add](#)  
 QVAR 100 INHALER, 100mcg/dose, 2 puffs  
 b.d. m.d.u., 1\*200 dose  
 EFORMOTEROL FUMARATE DIHYDRATE CAPSULE,  
 12mcg, 12mg b.d. m.d.u., 60

Controller Medication:  
 [Add](#)  
 QVAR 100 INHALER, 100mcg/dose, 2 puffs  
 b.d. m.d.u., 1\*200 dose  
 EFORMOTEROL FUMARATE DIHYDRATE CAPSULE,  
 12mcg, 12mg b.d. m.d.u., 60

**Recommended**

- Review Risk Factors
- Review Control
- Review Lung Function
- Review Triggers
- Review Action Plan
- Review Understanding Asthma
- Review Understanding Medication
- Review Managing My Asthma
- Review Other Important Topics

**Between 60%-80% (330 and 440 l/min)**

Your asthma is GETTING WORSE

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### Education Material

Management and action plans

Has the action plan from the previous consult been reviewed for this patient?  Reviewed

Generated or printed today?

Generate Plan

## ASTHMA ACTION PLAN

Name: JAMES, SID

Date plan prepared: 29/08/2003

Doctor's Name: DR. NEVILLE WALKER

YOUR BEST PEAK FLOW IS: 550 l/min

When your PEAK FLOW is  
Above 80% (440 l/min)

You will normally,  
Be free of regular night time wheeze or cough or chest tightness

Your asthma is GOOD

Continue your normal treatment:

Reliever Medication:

Add

QVAR 100 INHALER, 100mcg/dose, 1 p 200 dose

EFORMOTEROL FUMARATE DIHYDR

SALBUTAMOL SULFATE INHALER, 10

PREDNISOLONE TABLET, 25mg, 50m

Preventer Medication:

Add

QVAR 100 INHALER, 100mcg/dose, 2 puffs

b.d. m.d.u., 1\*200 dose

EFORMOTEROL FUMARATE DIHYDRATE CAPSULE,

12mcg, 12mg b.d. m.d.u., 60

Controller Medication:

Add

QVAR 100 INHALER, 100mcg/dose, 2 puffs

b.d. m.d.u., 1\*200 dose

EFORMOTEROL FUMARATE DIHYDRATE CAPSULE,

12mcg, 12mg b.d. m.d.u., 60

**THE PLAN IS DYNAMIC AND INTERACTIVE AND ALTERATIONS TO THE PLAN CAN BE MADE DIRECTLY**



### Recommended

- Review Risk Factors
- Review Control
- Review Lung Function
- Review Triggers
- Review Action Plan
- Review Understanding Asthma
- Review Understanding Medication
- Review Managing My Asthma
- Review Other Important Topics

**THE PLAN MAY BE PRINTED FOR THE CLIENT**

**ASTHMA ACTION PLAN**

Name: MR JAMES, SID Date plan prepared: 22/11/2003  
 Doctor's Name: DR. NEVILLE WALKER

**YOUR BEST PEAK FLOW IS: 700 l/min**

**When your PEAK FLOW is Above 80% (560 l/min)**  
 You will normally,  
 • Be free of regular night time wheeze or cough or chest tightness  
 • Have no regular wheeze, cough, chest tightness on waking or during the day  
 • Be able to take part in normal physical activity without asthma symptoms  
 • Need your reliever less than 3-4 times a week (except if used for exercise)

Your asthma is GOOD  
 Continue your normal treatment:  
 Reliever Medication:  
 EFORMOTEROL FUMARATE DIHYDRATE CAPSULE, 12mcg, 12mg b.d. m.d.u., 60  
 Preventer Medication:  
 SALBUTAMOL SULFATE INHALER, 100mcg/dose, 2 puff  
 Controller Medication:  
 QVAR 100 INHALER, 100mcg/dose, 1 puff b.d. m.d.u., 1\*200 dose  
 And a pile of text

**Between 60%-80% (420 and 560 l/min)**  
 You may,  
 • Have increasing night-time wheeze or cough or chest tightness  
 • Have symptoms regularly in the morning when you wake up  
 • Need extra doses of reliever medication  
 • Have symptoms which interfere with exercise  
 (You may experience one or more of these)

Your asthma is GETTING WORSE  
 Change your treatment to:  
 Reliever Medication:  
 Preventer Medication:  
 Controller Medication:  
 QVAR 100 INHALER, 100mcg/dose, 1 puff b.d. m.d.u., 1\*200 dose

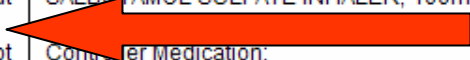
**Between 40%-60% (280 and 420 l/min)**  
 You may,  
 • Have wheeze, cough, chest tightness or shortness of breath  
 • Need to use your reliever medication at least once every 3 hours or more often

Your asthma is SEVERE  
 START TAKING Oral Steroid:  
 PREDNISOLONE TABLET, 25mg, 50mg b.d., 14

**Less than 40% (280 l/min)**

**EMERGENCY**

**AND SOME PREDICTABILITY ABOUT CLIENT LIFE STYLE IS PRESENTED**



**THE EDUCATE AND REVIEW SCREEN SUMMARISES MATERIAL THAT HAS BEEN DISCUSSED OR PRINTED**



Asthma 3+ Plan

Summary

Risk Factors

Severity

Control

Medication

Lung Function

Triggers

Action Plan

Educate and Review

**CLINICIAN MEMORY JOGGER**

Recommended

Review Risk Factors

Review Severity

Review Control

Review Lung Function

Review Triggers

Review Medication

Review Action Plan

Educate - Understanding Asthma

Educate - Understanding Medication

View Medication Guidance

**Education & Review**  
New visit

<Back

Next>

MR JAMES, SID (DOB: 08/08/1958, M)  
1 THE STREET, MELBOURNE 3000

**Understanding Asthma**

Reviewed Understanding Asthma

Reviewed

Concept of airway narrowing being a combination of

- Smooth muscle spasm.
- Airway swelling due to: 1) Oedema, fluid and proteins deposited on the airway wall; 2) Mucus hypersecretion; 3) Muscle and mucous gland enlargement.
- Illustrations should be used to explain these concepts.
- Use plain English rather than medical terminology.

Asthma the basic facts (22/11/2003)

COPD and asthma (22/11/2003)

Concept of asthma as an inflammatory disease

- Emphasise that asthma is an underlying tendency that does not go away.
- It can result in altered airway function so that excessive narrowing occurs when the airways are exposed to a trigger.
- Triggers may not always be apparent.

Asthma the basic facts (22/11/2003)

Common questions on asthma (22/11/2003)

Preventing asthma

Concept of three classes of asthma medications

- Reliever medication (bronchodilators).
- Preventer medication (anti-inflammatory agents).
- Symptom controllers (long-acting beta2 agonists).

Medications (22/11/2003)

**Understanding your medications**

Reviewed Understanding Medications

Reviewed

Explanation of medications and delivery devices

- Type
- Action
- Role in treatment.
- The need for preventive therapy to be used every day whether the patient feels well or not.
- Common side effects and how to cope with these.
- Alternative delivery devices.
- Need for correct inhaler technique.

Medications (22/11/2003)

Asthma devices

Other medications and asthma (22/11/2003)

CFC free asthma inhalers (22/11/2003)

- Emphasise that initiating treatment with asthma medications does not imply that treatment will be life-long





Summary

Risk Factors

Severity

Control

Pattern

Medication

Lung Function

Triggers

Action Plan

Educate and Review

Education Leaflets

Exit

**Recommended**

- Review Risk Factors
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- Review Lung Function
- Review Triggers
- Review Medication
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- Review Understanding Asthma
- Review Understanding Medication

**AND ALL THE WHILE .....**

**as we have been moving through this Electronic Decision Support Tool, the visits have been recorded and the compliance with the Asthma 3+ guideline is established.**



[Summary](#)

[Risk Factors](#)

[Severity](#)

[Control](#)

[Pattern](#)

[Medication](#)

[Lung Function](#)

[Triggers](#)

[Action Plan](#)

[Educate and Review](#)

[Education Leaflets](#)

[Exit](#)

**Recommended**

- Review Risk Factors
- Review Severity
- Review Pattern
- Review Lung Function
- Review Triggers
- Review Medication
- Review Action Plan
- Review Understanding Asthma
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# Brief Technical Insight

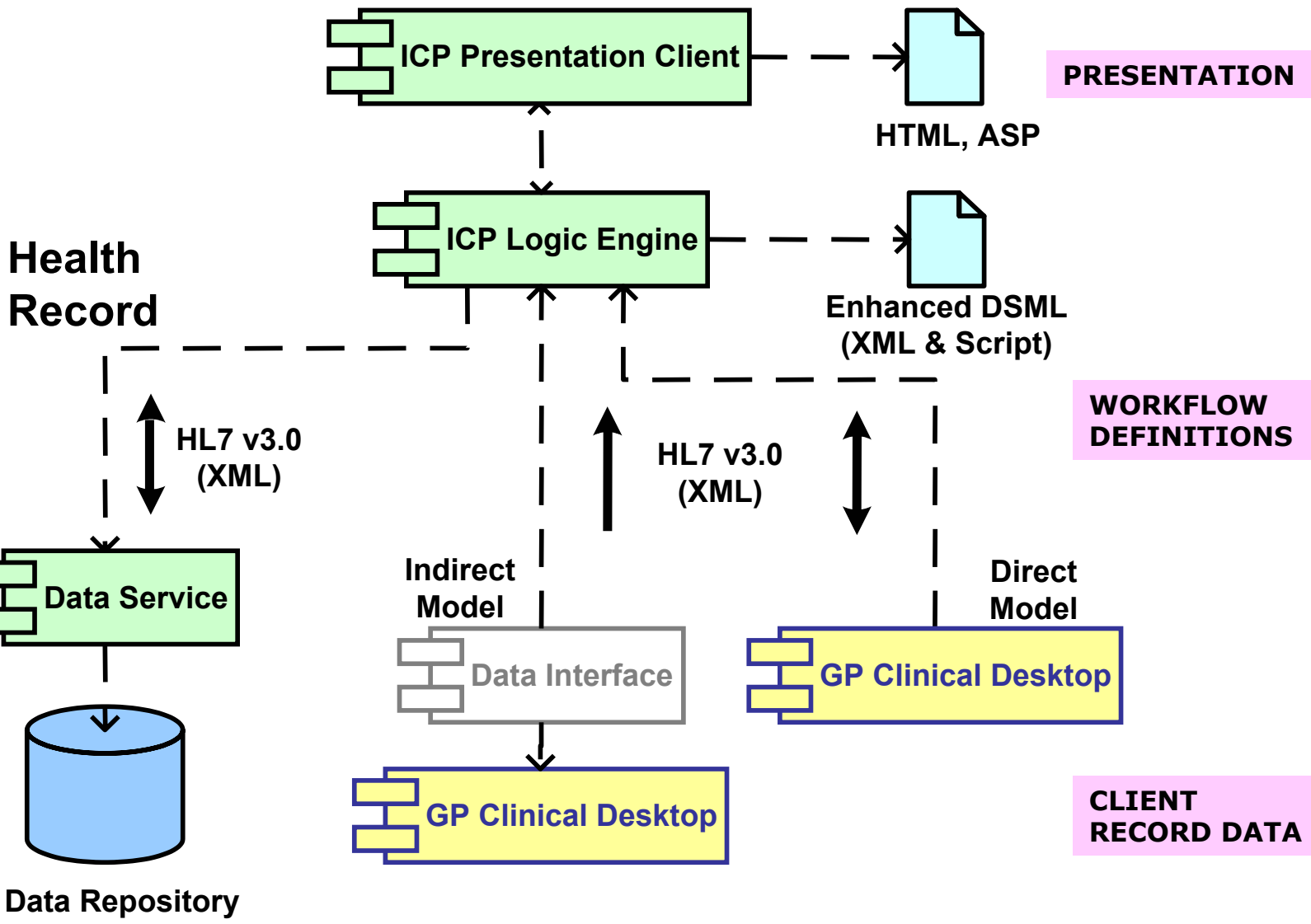
The tools and standards used in creating the EDSS and what the behind the scenes stuff looks like



ICP

ICP

Summary
Risk Factors
Severity
Control
Pattern
Medication
Lung Function
Triggers
Action Plan
Educate and Review
Education Leaflets
Exit
<b>Recommended</b>
Review Risk Factors
Review Severity
Review Pattern
Review Lung Function
Review Triggers
Review Medication
Review Action Plan
Review Understanding Asthma
Review Understanding Medication





Summary
Risk Factors
Severity
Control
Pattern
Medication
Lung Function
Triggers
Action Plan
Educate and Review
Education Leaflets
Exit
<b>Recommended</b>
Review Risk Factors
Review Severity
Review Pattern
Review Lung Function
Review Triggers
Review Medication
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Review Understanding Medication

# The Technical Importance of the Project

- While Asthma and Depression were the first diseases to be applied the tool that has been built could support **any clinical guideline**
- This Electronic Decision Support system is firmly based on recognised technical **standards applicable to health informatics**
- The investment by the JVP in this project is an investment in a software methodology that can be available for general use **without licensing costs**



- [Summary](#)
- [Risk Factors](#)
- [Severity](#)
- [Control](#)
- [Pattern](#)
- [Medication](#)
- [Lung Function](#)
- [Triggers](#)
- [Action Plan](#)
- [Educate and Review](#)
- [Education Leaflets](#)
- [Exit](#)
- Recommended**
  - Review Risk Factors
  - Review Severity
  - Review Pattern
  - Review Lung Function
  - Review Triggers
  - Review Medication
  - Review Action Plan
  - Review Understanding Asthma
  - Review Understanding Medication

# SUMMARY

## ICP P2 Electronic Decision Support

A tool to bring current best practice knowledge into the clinical consultation



- [Summary](#)
- [Risk Factors](#)
- [Severity](#)
- [Control](#)
- [Pattern](#)
- [Medication](#)
- [Lung Function](#)
- [Triggers](#)
- [Action Plan](#)
- [Educate and Review](#)
- [Education Leaflets](#)
- [Exit](#)

- Recommended**
- Review Risk Factors
- Review Severity
- Review Pattern
- Review Lung Function
- Review Triggers
- Review Medication
- Review Action Plan
- Review Understanding  
Asthma
- Review Understanding  
Medication

# Thankyou