Respiratory Health Implementation Group

Child Health

Dr Julian Forton
Consultant in paediatric respiratory medicine
Children's Hospital for Wales

Lead for RHIG Child Health

South Wales Paediatric Respiratory Network

September 21st 2018
1-5pm
Venue: PoW MPEC Lecture room A

Meeting Minutes

Present
Julian Forton
Lena Thia
Rachel Evans
Huma Mazhar
Kate Creese
Vishwa Narayan
Saurabh Patwardhan
Nakul Gupta
Lynfa Day
Janet James
Laura Hayter
Bhavee Patel
Kate Morgan
Ross Burrows

Apologies
Jeff Morgan
Martin Edwards
Dan Rigler
Zoe Roberts

1. Review Minutes from last meeting

Membership and clinical leads corrected
No other comments

2. October 2018 Audit – database presentation, plans and timeline
Julian Forton

JF presented plans for the South Wales Asthma Audit for October 2018. The database was reviewed and modified with additional questions added thought to be important and worth asking.
The following was agreed
Bullet points
1) JF to modify database and send out regional databases to all clinical leads in time for the start of the audit on 1st October 2018

1) A paper proforma of the database input form will be circulated (JF) so that data can be collected by the discharging doctor, and entered into the data base at a later date
2) All clinical leads to identify computer where the access database works and can be accessed by designated staff who will input data.
3) Clinical leads to communicate with local staff about the audit i.e. other consultants and ward staff, and identify a lead responsible for data input (themselves, junior doctor, asthma nurse….)
4) Databases will be sent to JF at end of the month (Monday 29th October). An XL spreadsheet of the data will be returned to each clinical lead so that they can review their own data. All data will also be analysed centrally, and presented at next SWPRN meeting.

3. Workstream Group 1: South Wales Asthma Action Care Plan

Jyotsna Vaswani (RGwH) Lynfa Day (RGH) Dan Rigler (Morriston) Laura Hayter (POW) Claire Briggs (UHW)

Workstream output was noted

Content of asthma action plan was discussed using the existing plan that is currently used by Glangwili, Withybush, Prince Charles, UHW and possibly Bridgend, as a template

Bullet points:

Additional elements to include

- Triggers
- What to do with exercise
- A statement on steroid responsiveness
- Contacts
- Some discussion was had with regard to number of puffs to admimister and when. Consensus was reached with
  1) 6-10 puffs in the event of mild new symptoms
  2) 10 puffs 4 hourly requires assessment with GP appointment that day
  3) Up to 10 puffs 4 hourly as a threshold up to which salbutamol can be safely administered on discharge was agreed
  4) 2 puffs is what you take before exercise

- JF will modify, circulate and now take forward for presentation with RHIG on Thursday 27/10/2018

1. Workstream Group 2 : South Wales Inpatient care pathway

Jyotsna Vaswani (RGwH) Rachel Evans (Morriston) Humphrey Okuonghae (PCH) Sue Lewis (UHW) Martin Edwards (UHW in absentium) Saurabh Patwardan (Carmarthen in absentium) Bhavee Patel (Morriston)

Workstream output was noted

Content of acute asthma care pathway was discussed using
1) Existing template
2) Gwent inpatient pathway
3) Morriston inpatient pathway

- Concerns regarding the length of the impatient proforma were highlighted

- The value of numerous directed questions was discussed – certainly of value for audit and may need to be modified to include the NAPAC specific questions when NAPC audit commences next year
- It was decided to concentrate on a single A4 flowchart of care for acute asthma and allow hospitals to generate their own paperwork for hospital pathway.
- Discussions highlighted the following agreed principles:

1) The flowchart should be one page
2) The evidence for magnesium nebulisers was questioned - there is inadequate evidence to include routinely in acute care – few centres are using it outside Wales. Magnesium nebulisers were removed from acute therapy but left as an option.
3) The importance of early steroid administration needs to be emphasized – if given as liquid at the time of the first nebuliser (observed by the doctor when administered by nurse) it is unlikely to be vomited.
4) Dexamethasone was discussed –there is little evidence for this in hospital – studies show increase reattendance. It may be the future but is not the present if we go by national recommendations and evidence base. If introduced, it will need a wide educational program so that its management is made clear to the wider community (GPs) – not included in the proforma at this stage.
5) As a new innovation, a 4 hour assessment should be highlighted where a proactive decision is made or at least considered, to escalate those children still on one hourly nebulisers to IV therapy. This is to prevent 12 hours of hourly nebs overnight
6) There needs to be made clear, a distinction between IV bolus therapy and IVI – particularly for salbutamol where there exists a bolus treatment and an IVI – these are separate treatments - salbutamol does not need a loading dose. Conversely, Aminmohylline needs a loading dose followed by IVI and there is no such thing as an aminophylline bolus treatment. This anecdotally appears to be poorly understood in the wider consultant body, with the term salbutamol loading dose being confused with salbutamol bolus. This is poorly stated in the current algorithm that was produced a few years ago.
7) A discussion was had about introducing IV salbutamol as an initial IV bolus treatment (with an option for IV magnesium at this stage as well). This can then be followed by escalation after reassessment to IVI
8) The choice of IVI order was discussed. It was accepted that both were of equal value.
   The advantages of aminophylline
   - children will have already received much salbutamol and be saturated with beta agonist – so give something else
   - Giving aminophyyline after IV salbutamol bolus and before IVI salbutamol naturally makes a distinction between these 2 salbutamol treatments and avoids the confusion that exists
   - Salbutamol produced acidosis

   The advantage of salbutamol
   - The risk of toxicity in those on oral theophylines if in error the loading dose is not omitted.

The advantages of compromise so that we “Do the right thing first” were accepted by all present and there was a willingness to compromise for this outcome. The advantages of standardising care will be to reduce human error, deliver consistent approach for junior learning - this is a system change over and above each individual institution and requires give and take. A consensus was drawn that aminophylline should be first line IVI after IV salbutamol +/- IV magnesium boluses.

1) Representatives from all institutions were present and are asked to establish consensus within their institutions.

Bullet points:

- JF will generate an acute care pathway and circulate. This hopefully allows for variation between institutions on the subject of which IV boluses to give and which IVI to give, untl consensus is established. This will be taken forward for presentation to RHIG on Thursday 27/10/2018

Respiratory Health Delivery Plan 2018-2020

Llywodraeth Cymru
Welsh Government

Reducing inappropriate variation and sharing best practice

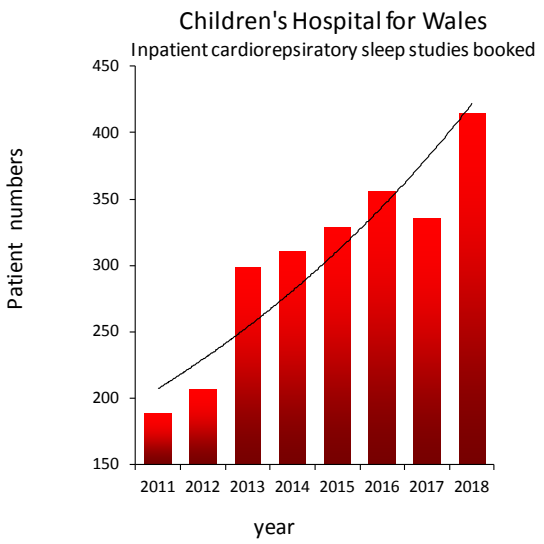
child Health

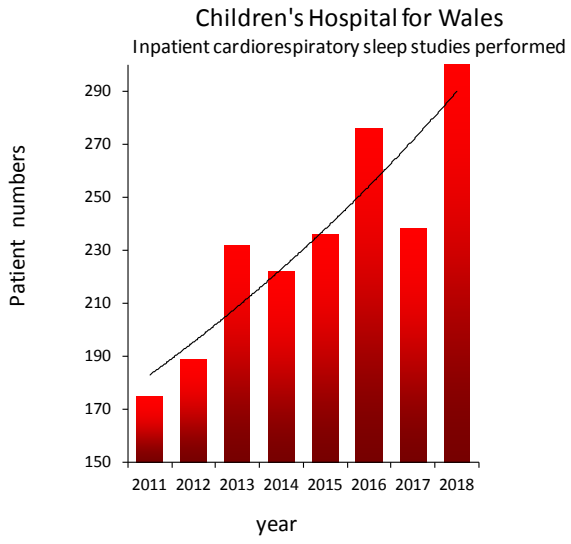
Respiratory Health Implementation Group

Child HealthWorkstreams

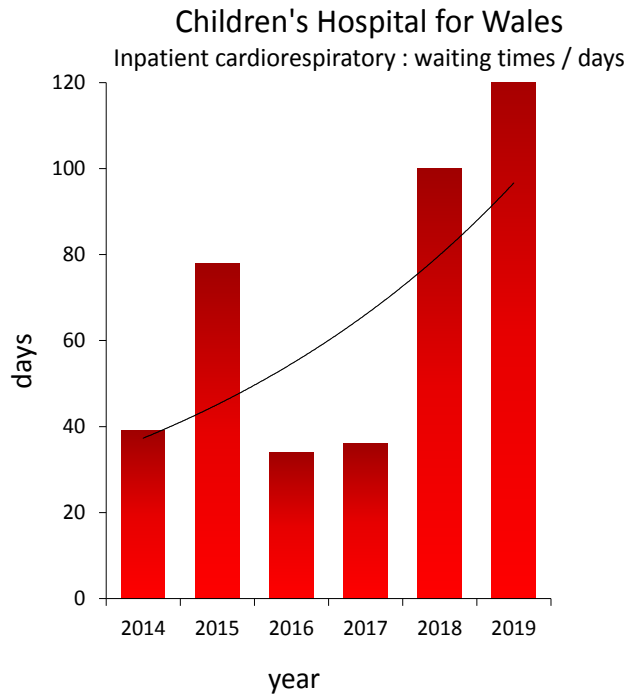
Sleep
Home ventilation
Oxygen
Cystic fibrosis
Bronchiolitis
Spirometry and lung function
ASTHMA

Child Healthsleep





Child Healthsleep

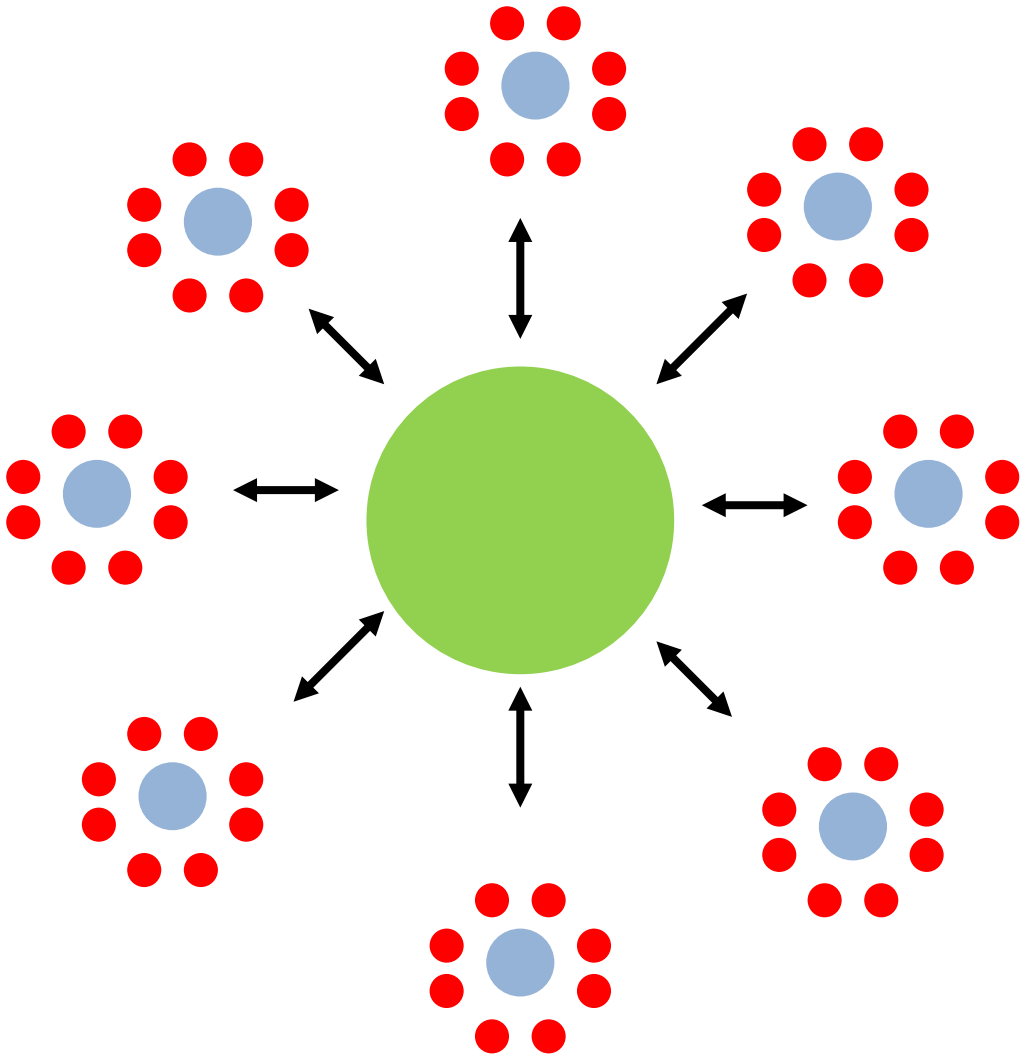


Aims

- Help develop infrastructure to ensure cardiorespiratory sleep studies are available to all children in Wales and are deliverable within clinically safe timelines
- Develop an integrated national paediatric sleep database

Child Healthsleep

Integrated national paediatric sleep database



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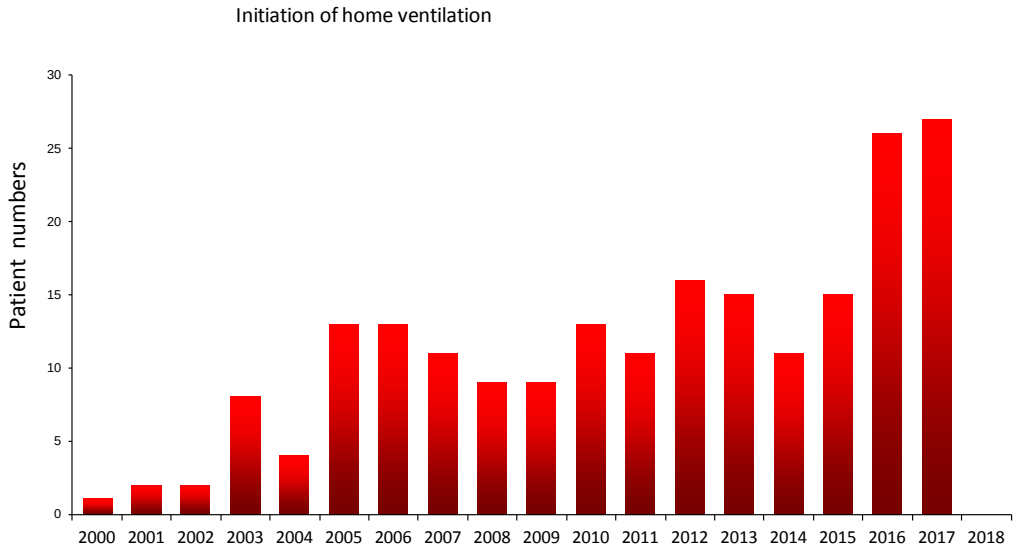
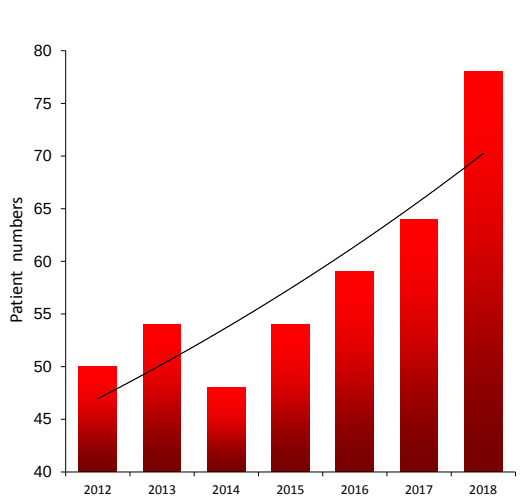
April 18, 2019

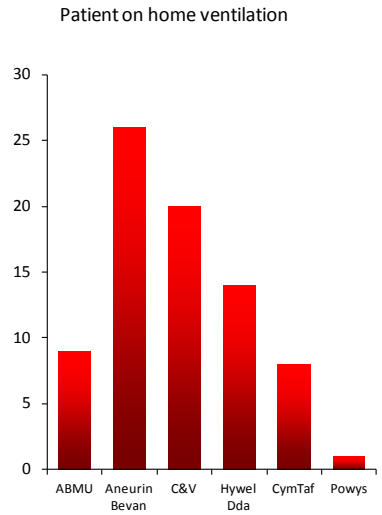
Go Live at the South West Regional Health Authority – Victoria North Cluster

A new site at SWRH – Victoria North Cluster went live for PAS, Pharmacy and Stock Control modules of...

Child Healthhome ventilation





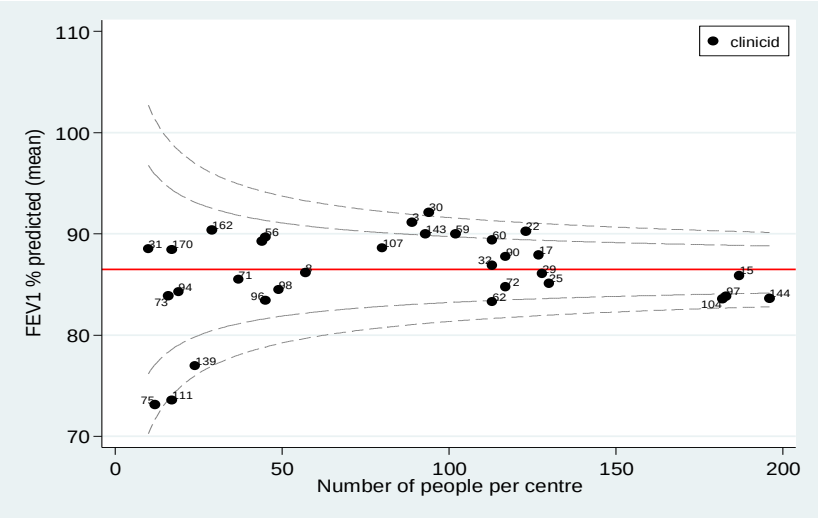


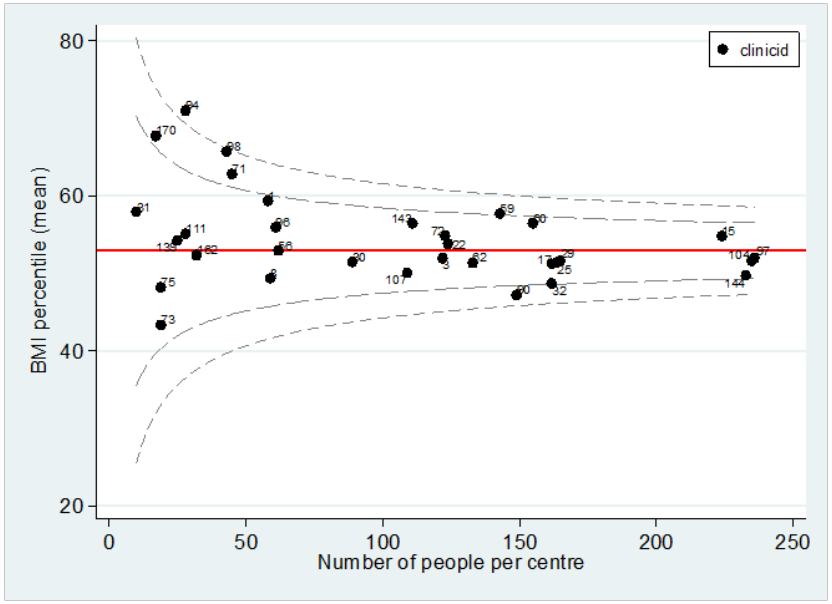
- Development in ventilator technologies
- cultural change in expectations in the management of children with all disability
- increasing incidence of obesity-related obstructive sleep apnoea in children.

Aims

- Accessibility data for all UHBs
- Discharge to home pathways

Child Healthcystic fibrosis

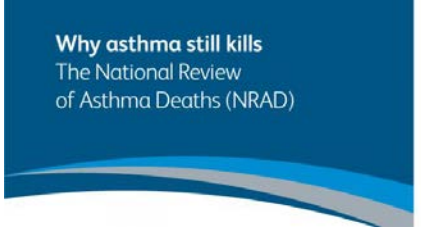




Aims

- National audit parameters

Child Healthasthma



'Why asthma still kills:
The national review of asthma deaths (NRAD)'

- All asthma deaths in UK from 2012 reviewed
- Cases reviewed 276
- Deaths from asthma 195
- Age <10 years N=10 (5%)
- 10-19 years N=18 (9%)

- 57% not under a specialist
- Previous hospital admission in 47%
- 10% died in 28 days after discharge from hospital

NRAD Recommendations

- Referral to specialist if >2 coursed of systemic steroids in the last 12 months or on BTS stepwise treatment level 4 or 5
- Secondary care follow up within 28 days after every admission to hospital, and after 2 admissions to ER
- Personal asthma action plan
- Annual structured review

- Urgent review of asthma care to all patients prescribed > 12 salbutamol inhalers / year
- Encourage combination inhalers. LABA should be prescribed in a single combination inhaler together with an inhaled corticosteroid
- Smoking cessation support

Easy treatment decision

Volumatic
For use with Clenil Modulite, Flixotide, and Seretide inhalers

AeroChamber Plus
For use with Alvesco▼ Qvar, and Seretide inhalers

Nebuchamber
For use with Pulmicort inhaler

Able Spacer

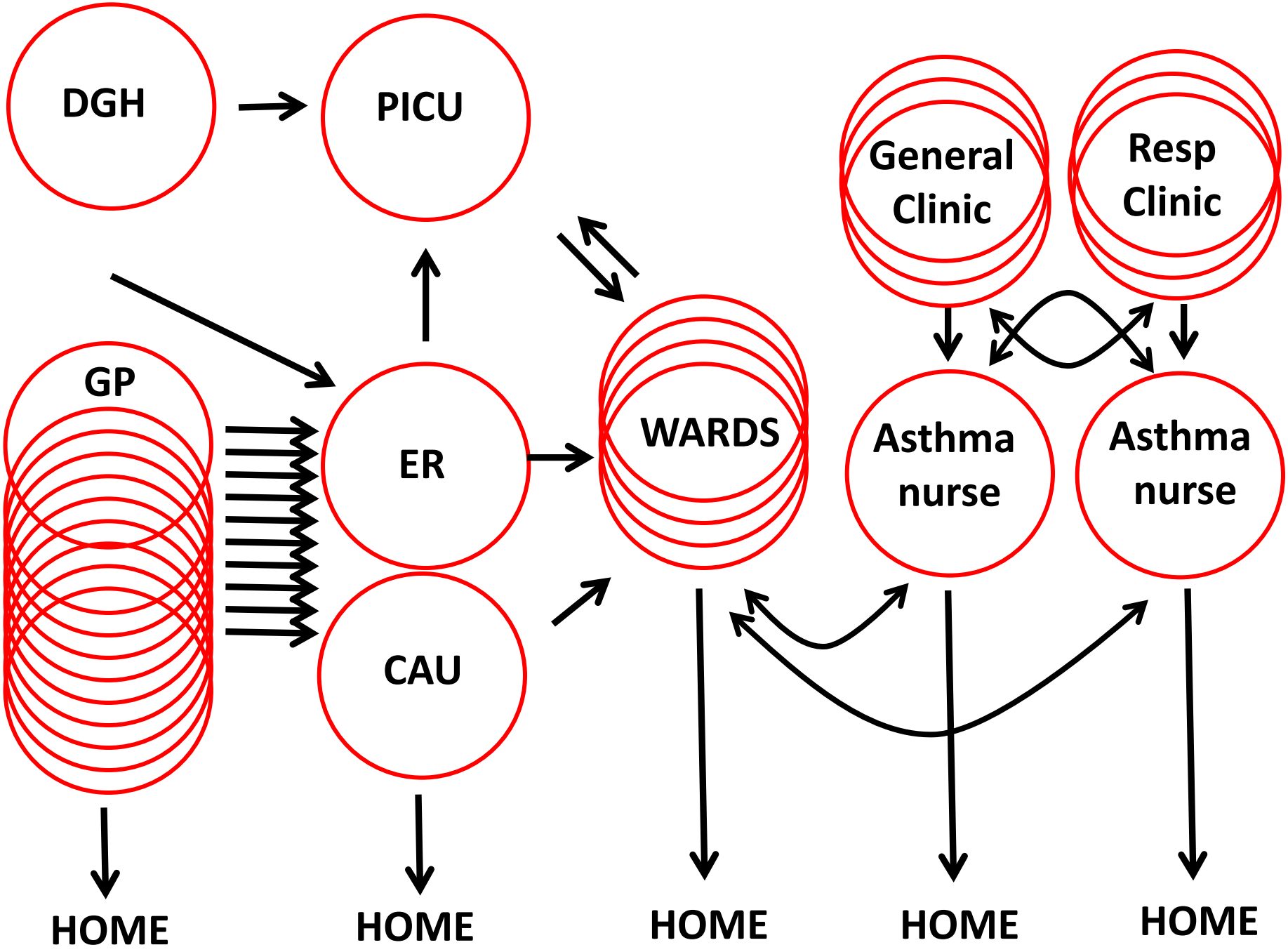
complex treatment decision


Maui
our mighty
What Ma
about A
by Wake Co
AeroChamber

Medical profession

simplify care


Patient pathway


DGH
PICU
General Clinic
Resp Clinic
GP
ER
WARDS
Asthma nurse
Asthma nurse
CAU
HOME
HOME
HOME
HOME
HOME

The management of asthma in children

ED

wards

Children's assessment Unit

Secondary care

clinic

Tertiary care

CAU

Specialist asthma nurses

Other paediatric specialities

Ward nurses

Clinic nurses

ED doctors

ED nurses

Tertiary difficult asthma doctors

General paediatric juniors

Disparate evolution

Different solutions

Confusing for patient

Confusing for staff

Standards unknown

Volumatic
For use with Clenil Modulite, Flixotide, and Seretide inhalers

AeroChamber Plus
For use with Alvesco▼ Qvar, and Seretide inhalers

Nebuchamber
For use with Pulmicort inhaler

Able Spacer

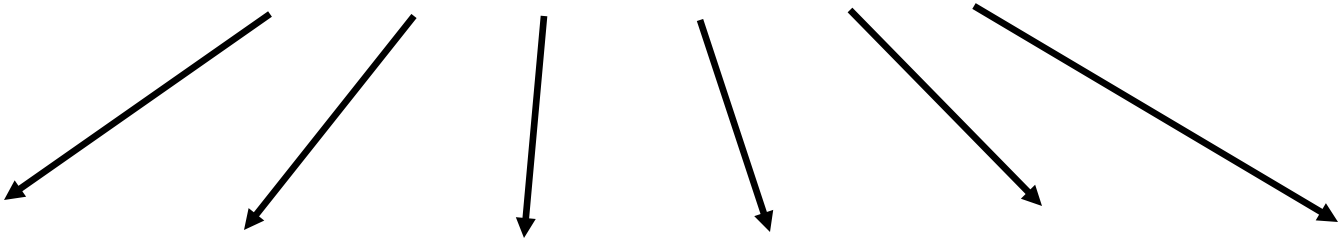
Responsibility Cascade
Local asthma champions

Simple guidelines

Audit service tracking and run charts

Local dissemination and documented skills maintenance - doctor, nurse, pharmacist

South Wales Paediatric Respiratory Network



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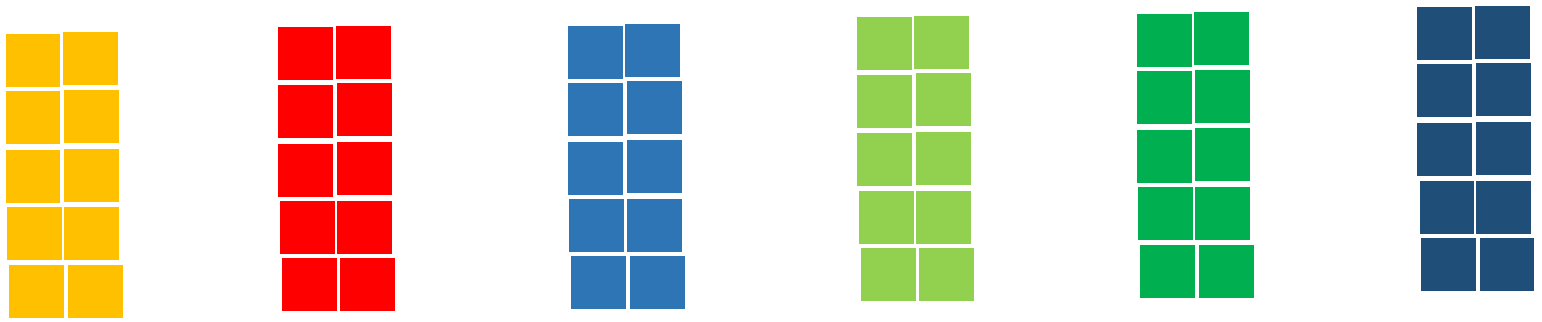

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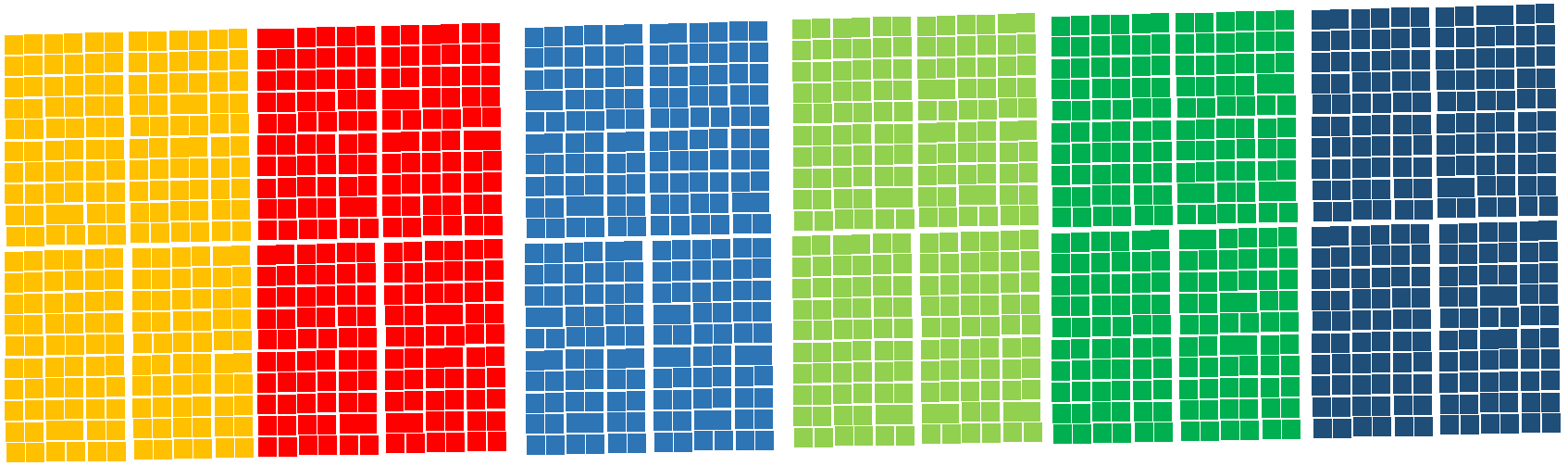


Respiratory Health Implementation Group

child Health

South Wales Paediatric Respiratory Network

	Clinical Lead Respiratory	Clinical Lead Asthma	Nurse Specialist	Pharmacist
UHW	Julian Forton	Julian Forton (tertiary care) Dan Rigler (secondary care)	Janet James (tertiary) Sue Lewis (secondary)	Lucy Wheeler
Royal Gwent Hospital	Jyotsna Vaswani	Jyotsna Vaswani	Kathy Lorentz	Kate Morgan
Nevill Hall Hospital	Marcus Pierrepoint	Marcus Pierrepoint	Christine Lassman	?
Prince Charles Hospital	Humphrey Ohuonghae	Humphrey Ohuonghae	Nicola Riddiford	Mark Allman / Rhian Evans
Royal Glamorgan Hospital	Sami Khan	Sami Khan	Lynfa Day	jo Nelmes
Princess of Wales Hospital	Kate Creese	Kate Creese	Laura Hayter	Ross Burrows
Morriston Hospital	Rachel Evans	Rachel Evans	Joy Williams	Bhavee Patel
Glangwili and Withybush Hospitals	Vishwa Narayan	Saurabh Patwardhan	?	Anwen Richards

ASTHMA TOOLKIT

South Wales Paediatric Respiratory Network

SOUTH WALES PAEDIATRIC RESPIRATORY NETWORK

Membership Clinical leads

MEETINGS

20180615_Meeting 1_agenda

20180615_Meeting 1_MINUTES

20180921_Meeting 2_agenda

20180921_Meeting 2_MINUTES

Document 1: acute asthma pathway

Document 2: asthma care plan

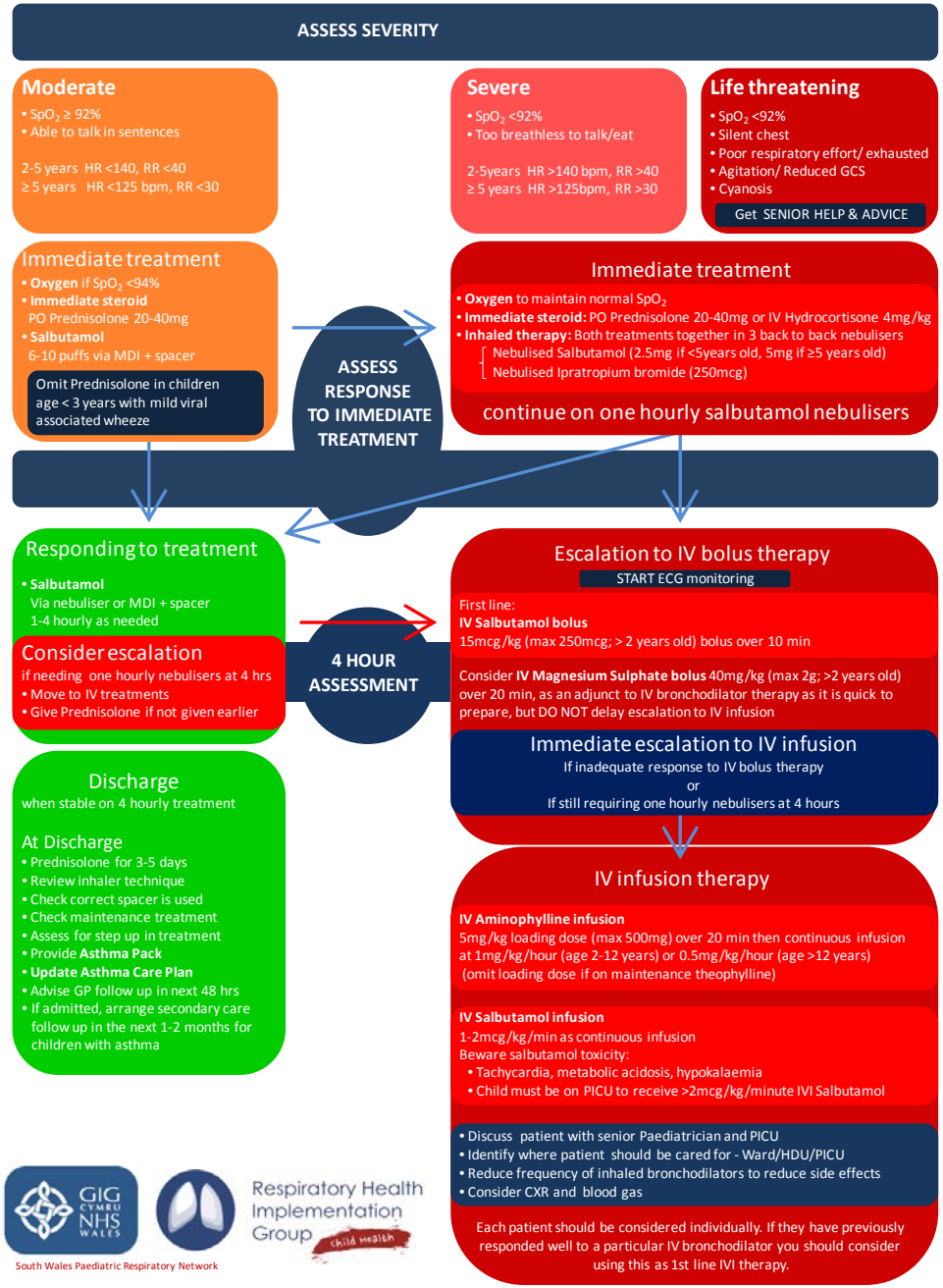
USEFUL LINKS & RESOURCES

- UHW care plan
- Asthma UK action plan
- monkey wellbeing action plan
- London Asthma toolkit – multiple action plans

- UHW information leaflet
- Royal Glamorgan Bundle

- National asthma and wheeze management plan
- Royal Gwent Wheeze pathway 2017
- London Asthma toolkit – multiple care pathways

Management of Acute Asthma and Wheeze in Children aged >2 years old



When your child is well

→ Give the preventer treatment as prescribed
→ Always give inhaler treatment via the spacer

If your child

- Needs the reliever inhaler more than usual
- Is coughing or wheezing more
- Is coughing and waking at night

→ Increase reliever inhaler to 6-10 puffs every 4 hours
→ Always give inhaler treatment via the spacer
→ Continue your preventer treatment
→ Make an appointment to see your GP in the next few day

If your child

- Is getting worse with more wheeze and coughing
- Is feeling out of breath

→ Increase reliever to 10 puffs every 4 hours
→ Continue your preventer treatment
→ If still not improving see your GP today
→ Give Home Steroid Rescue Pack if you have been directed to do so

If your child

- Is distressed by wheeze and is short of breath
- Won't play because of breathlessness
- Is too breathless to speak
- Reliever therapy doesn't last long

→ Give 10 puffs of the reliever inhaler via spacer
→ If no improvement, repeat 10 puffs of reliever via spacer
→ If improving, give 10 puffs of the reliever every 4 hours & seek medical advice
→ Give Home Steroid Rescue Pack if you have been directed to do so
If still not improving call GP for urgent advice or dial 999

As your child improves

Give up to 10 puffs of reliever as needed
Seek advice if 10 puffs doesn't last 4 hours
Check on your child overnight

Regular treatment

Reliever therapy

-
-
-

Preventer therapy

-
-
-
-

Home Steroid Rescue pack

-

I take all inhalers with a

☐ Spacer and mouthpiece
☐ Spacer and mask

Mouthpiece spacers are far more effective than mask spacers
Children age > 3years should be able to use a mouthpiece spacer

When I'm unwell, my wheezin

☐ Responds to steroids
☐ Does not respond to steroic
☐ We are not sure

How to manage your asthma after discharge from hospital

Most children with asthma and many children with pre-school wheeze will be given a course of steroids (prednisolone) when they become unwell.

- If you have been started on a course of prednisolone, complete the course that you have been given – you need to give
- Give the reliever inhaler via spacer as needed, up to 10 puffs every 4 hours
- Keep the regular treatments going
- avoid over-excitement
- Please check on your child overnight
- If your child needs more reliever than 10 puffs 4 hourly see your GP or visit A/E
- You should make an appointment to see your GP within 48 hours of discharge

Triggers that make me wheeze

-
-
-
-
-

Before exercise, 2 puffs of salbutamol via a spacer may help prevent me wheezing

These are my contacts

Doctor (GP)

-

Nurse

-

Hospital consultant

-

Want to give up smoking?

For free help and advice
see your G.P
or call for free

0800 085 2219

https://www.helpmequit.wales

For further advice or support please contact:
Paediatric Asthma Nursing Service
University Hospital of Wales: 02920742116
Llandough University Hospital: 02920715514

GIG CYMRU NHS WALES

Respiratory Health Implementation Group Child Health

GIG CYMRU NHS WALES

Asthma & Pre-school wheeze Management Plan

Patient Addressograph

Last updated:

HOW TO MANAGE MY ASTHMA AFTER DISCHARGE FROM HOSPITAL

Most children with asthma and many children with pre-school wheeze will be given a course of steroids (prednisolone) when they become unwell.

- If you have been started on a course of prednisolone, it is important that complete the course that you have been given.
- Give the reliever inhaler via spacer as needed, up to 10 puffs every 4 hours
- Keep the regular treatments going
- Parents please avoid over-excitement
- Please check on your child overnight
- If your child needs more reliever than 10 puffs 4 hourly see your GP today or visit A/E
- You should make an appointment to see your GP within 48 hours of discharge

GP ASTHMA CLINIC

Ask for a review if

- Your child is getting lots of mild attacks
- Your child starts using their reliever inhaler more than 3 times a week.
- Use the "Asthma Control Test" to see how you are doing. Find it at **www.asthma.org.uk**

BEFORE EXERCISE

2 puffs of salbutamol via a spacer may help prevent me wheezing and coughing.

TRIGGERS THAT MAKE ME WHEEZE

Please list below:

THESE ARE MY CONTACTS

Doctor (GP):

Nurse:

Hospital consultant:

Want to give up smoking?

For free help and advice see your G.P or call for free 0800 085 2219
www.helpmequit.wales

GIG CYMRU NHS WALES

ASTHMA AND PRE-SCHOOL WHEEZE

Management Plan

Patient Addressograph

Last updated:

MONITORING YOUR ASTHMA

IF YOU ARE GETTING WORSE

- Wheeze and coughing is getting worse
- Your child is feeling out of breath

WHAT TO DO NEXT

Increase reliever to 10 puffs every 4 hours

Give Home Rescue Steroid if directed to do so

Continue your preventer treatment

See your GP today or attend A&E

NOTICING SYMPTOMS?

- Using reliever inhaler more than usual
- Coughing or wheezing more
- Coughing and waking at night

WHAT TO DO NEXT

Always give inhaler treatment via the spacer

Increase reliever inhaler to 6-10 puffs every 4 hours

If improving see your GP in the next few days

If not improving, see your GP today

Continue your preventer treatment

WHEN YOU ARE FEELING WELL

WHAT TO DO NEXT

Always give inhaler treatment via the spacer

Take the preventer treatment as prescribed

HAVING A SEVERE ATTACK?!

- Distressed by cough and wheeze or breathing hard?
- Won't play because of breathlessness
- Is too breathless to speak
- Reliever therapy doesn't last long

This is life threatening: Act early: Call 999 or go to A&E immediately

WHILST WAITING TO BE SEEN!

- Give 10 puffs of the reliever inhaler via spacer
- Continue with 10 puffs reliever via spacer as often as needed
- If you have Home Rescue Steroid give a dose as soon as possible

SYMPTOM CHECKER

AS YOUR CHILD IMPROVES

Give up to 10 puffs of reliever as needed. Seek advice if 10 puffs doesn't last 4 hours
Check on your child overnight

REGULAR TREATMENT

Reliever therapy

Preventer therapy

Home rescue steroid

I ALWAYS USE

- ☐ Spacer and mouthpiece
- ☐ Spacer and mask

Mouthpiece spacers are far more effective than mask spacers. Children age >3years should be able to use a mouthpiece spacer

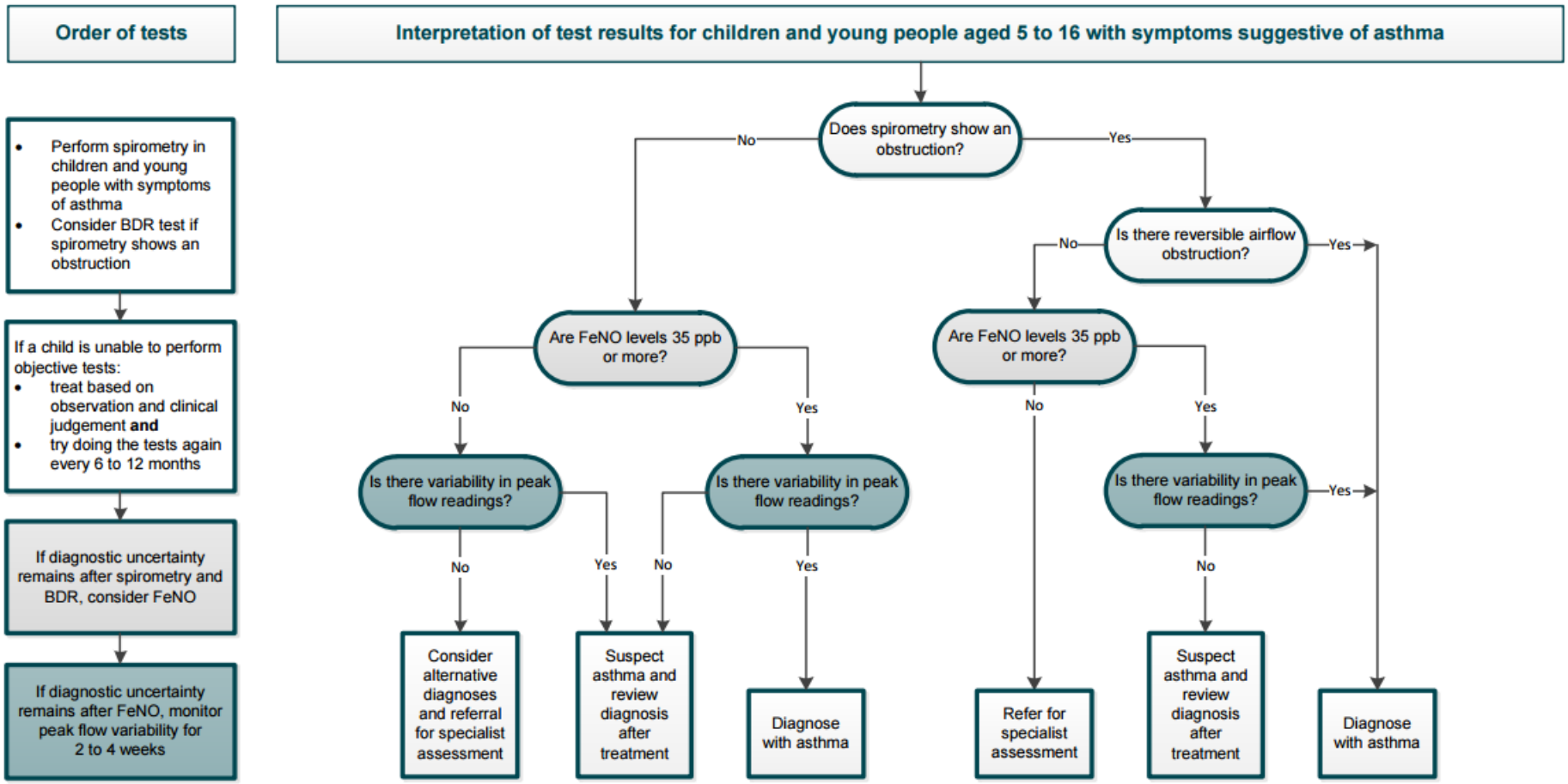
WHEN I'M UNWELL, MY WHEEZING

- ☐ Responds to steroids
- ☐ Does not respond to steroids
- ☐ We are not sure

For further advice or support please contact:
Paediatric Asthma Nursing Service

Names and addresses here

Algorithm B Objective tests for asthma in children and young people aged 5 to 16



Abbreviations:
FeNO, fractional exhaled nitric oxide
BDR, bronchodilator reversibility

Asthma app - scoping

What we have discussed is a database with 3 interfaces with different functionality

1) Patient -

i) provides guidance and
ii) enables data input

2) Resp nurse or GP

i) interface for asthma annual review (or other) including change medication / spacer
ii) interface to do tests for diagnostics and enter data
iii) provides feedback data with regard to surgery performance to nurse

3) Central

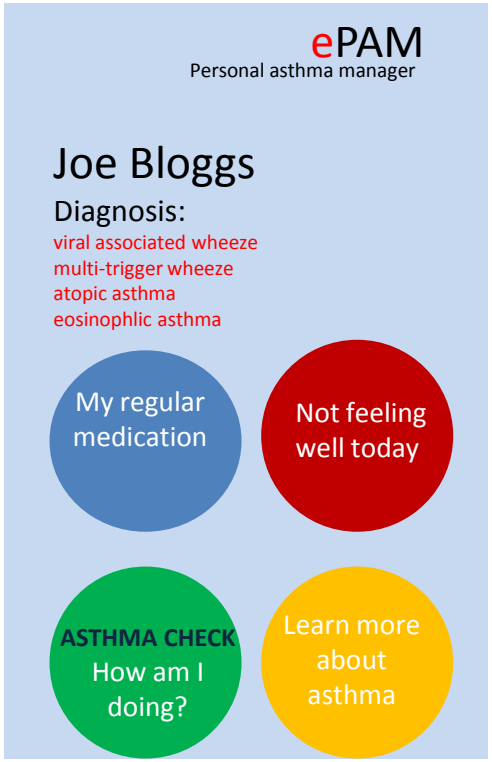
i) research interface looking at asthma population
Automated data processing for service tracking and/or data dump for analysis
ii) PUSH central

- for reminders to patients for data collection
- for feedback to patients having poor markers of control
- for feedback to poor performing surgeries

I have drawn out some pathways on the app to get an idea of how it might be structures. I have included the patient app screen pathways, the nurse interface page and the central data functions. Having thought for a ling time about how to write it down, I felt this explained it the best way, but we may need to meet.

Its ambitious – much more than an app that surrogates asthma care plan, but I think this would be excellent. There are other apps (one from Basel, Switzerland) called asthma which is clearly designed to capture prospective data – it has no role in education and no role in integrating into the annual asthma review. It does have some pages on consent and data use. It uses the asthma control test which I want to also - this is trade marked and needs permissions (GSK)–there is also a child asthma control test (4-11) which we should use – I have attached them both

Hope this is what you meant by scoping the app


ePAM
Personal asthma manager
Joe Bloggs
Diagnosis:
viral associated wheeze
multi-trigger wheeze
atopic asthma
eosinophlic asthma
My regular medication
Not feeling well today
ASTHMA CHECK
How am I doing?
Learn more about asthma

ePAM
Personal asthma manager

Joe Bloggs
Diagnosis:

Not feeling well today

mild

moderate

severe

info

Getting worse

Getting better

As your child improves:

Insert "Getting better" advice from paper care plan

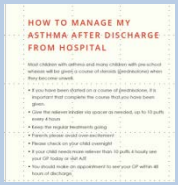
If you are having repeated mild attacks you need to see your GP or asthma nurse

info

Getting worse

Getting better

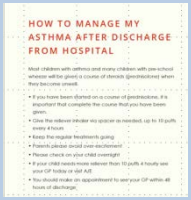
You have had a serious asthma attack and should have seen your GP or visited AE. Once you are back home....



info

Getting better

You have had a severe asthma attack.
Once you are back home.....

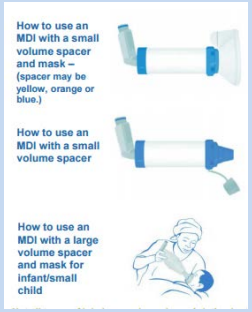


ePAM
Personal asthma manager

Joe Bloggs

Diagnosis:

My regular asthma medication



1. Remove the cap from the inhaler. Shake the inhaler and insert into the back of the spacer.
2. Place the mask of the spacer over the mouth and nose of the child and ensure there is a good seal.
3. Keeping the spacer level press the inhaler canister.
4. Encourage the child to breathe in and out **slowly and gently** for 5 breaths, (if you hear a whistling sound they are breathing in to quickly).
5. Remove the mask from the child's face.
6. If taking another dose, wait 30 seconds and repeat steps 1-4. Replace mouthpiece cover after use.

1. Remove caps from the inhaler and spacer. Shake the inhaler and insert into the back of the spacer.
2. Breathe out gently as far as is comfortable. Put the mouthpiece of the spacer into your mouth and seal your lips around it.
3. Press the canister once to release a dose of medicine. Breathe in **slowly and steadily** (if you hear a whistling sound you are breathing in too quickly).
4. Remove spacer from your mouth and hold your breath for 10 seconds, or as long as is possible, then breathe out slowly.
5. If taking another dose, wait for 30 seconds and repeat steps 1-4. Replace the mouthpiece covers after use.

1. Remove the cap.
2. Attach the mask to the spacer mouthpiece.
3. Shake the inhaler and insert into back of spacer.
4. Tip the spacer to an angle of 45° or more to allow the valve to remain open.
5. Place the mask over the mouth and nose of the child to ensure there is a good seal.
6. Press the inhaler canister and keep the mask on the child's face for 5 breaths.
7. Remove the mask from the child's face.
8. For a further dose wait 30 seconds and repeat steps 3 to 7.

This will be filled in electronically by healthcare worker who logs in to their account and can access the child's account, either on a phone or on the computer interface

Not sure if patient should be able to change this –probably not

ePAN
Personal asthma manager

Joe Bloggs

Diagnosis:

ASTHMA CHECK
How am I doing?

Some of these tests you can do yourself. Other test may be done by your asthma nurse or at the hospital clinic

Do yourself

Do the Asthma Control Test – a quick questionnaire to see how you are doing

Perform a one off peak flow

In clinic

Start a one month peak flow diary

Perform a peak flow reversibility test

Record your clinic spirometry results here (age > 12 years)

Record your FeNO result here

Review all my results →

Asthma control test
ACT Graph here

Best peak flow
peak flow Reversibility test

Before :
After:

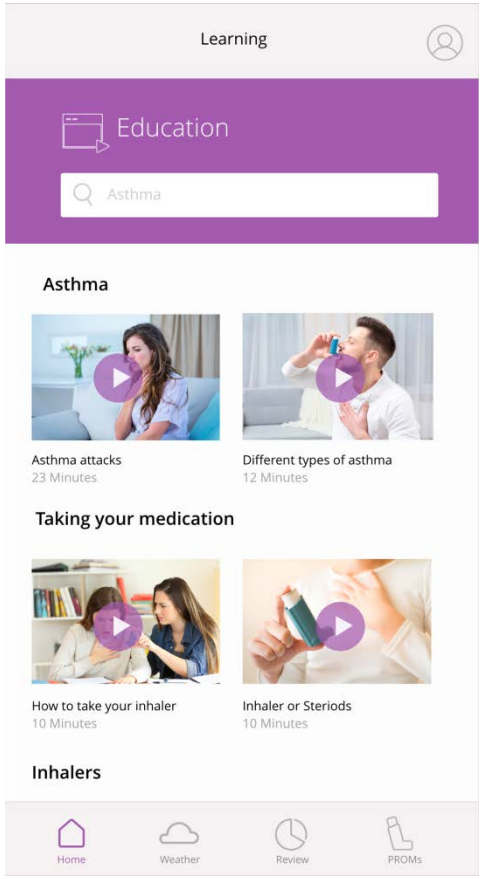
Latest peak flow diary
Date:
Peak flow diary Graph here

Latest spirometry
Latest Feno
Feno Graph here

ePAN
Personal asthma manager

Joe Bloggs

Learn more about asthma



Different types of asthma and wheeze in children

How to take your inhaler with a spacer

Should I get oral steroids when I have an asthma attack

How should I use my steroid rescue dose if I've been given one

What are the main risk factors for having an asthma attack

Will having lots of asthma attacks harm my lungs

What is peak flow and why have I been asked to take a 4 week peak flow diary

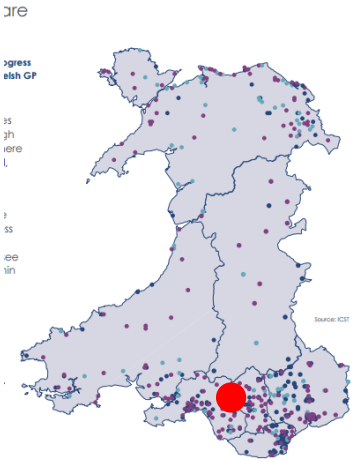
What is spirometry and when might I do this

What is a reversibility test

ePAM Dashboard for nurse / GP

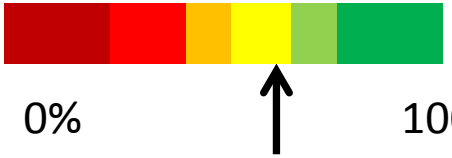
Account holder: Dr Jones

Surgery statistics



Number of children with asthma and wheeze at *this surgery* who are registered with ePAM

Proportion of children with asthma and wheeze at *this surgery* who are registered with ePAM, who have had reversibility testing to confirm a diagnosis of asthma



Find out about different types of asthma and wheeze in childhood and how to make the right diagnosis

Other info

Other info

Asthma attacks
23 Minutes

Different types of asthma
12 Minutes

Taking your medication

How to take your inhaler
10 Minutes

Inhaler or Steriods
10 Minutes

ePAM Dashboard

Account holder: Dr Jones

Patient Name, number, address

Treatment review

REGULAR TREATMENT

Reliever therapy

Preventer therapy

Home rescue steroid

I ALWAYS USE

- Spacer and mouthpiece
- Spacer and mask

Mouthpiece spacers are far more effective than mask spacers. Children age >3years should be able to use a mouthpiece spacer

WHEN I'M UNWELL, MY WHEEZING

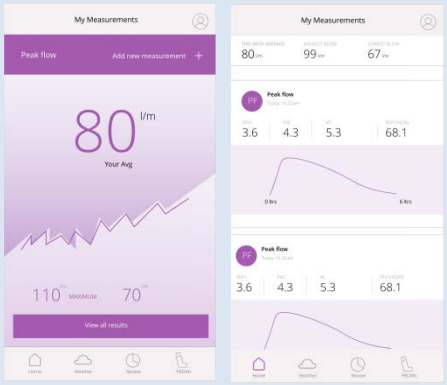
- Responds to steroids
- Does not respond to steroids
- We are not sure

TRIGGERS THAT MAKE ME WHEEZE

Please list below:

Investigations review

Results dashboard



Peak flow diary
Best peak flow
Best spirometry
Reversibility testing
Eosinophil count

clinic notes

Clinic tests today

- ☐ ACT
- ☐ peak flow
- ☐ peak flow reversibility test
- ☐ start one month peak flow diary
- ☐ Spirometry reversibility test (usually age > 12)
- ☐ *FeNO (usually age > 12*
- ☐ Blood tests (blood eosinophil count)

Clinic note

Working diagnosis

viral associated wheeze
multi-trigger wheeze
atopic asthma
eosinophlic asthma
Choose one in drop down menu

Previous clinic visits

1/1/2018

1/1/2017

Central data to collect

Usage

Number of children registered with ePAM
Is it being used – visit rate to app
Accessing education modules

Diagnostics

Reversibility test (peak flow)
Reversibility test (spirometry in age > 12 years)
Eosinophil count

Asthma Control

Asthma control test
GP attendance
Hospital AE
Hospital admission

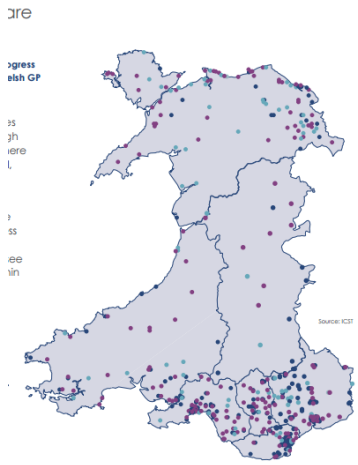
PUSH statistics

Monthly Asthma control test
Monthly Self reported hospital admissions and GP attendances

Imaginary central Dashboard

Account holder: Dr Forton

Usage



Number of children with asthma or wheeze who are registered with ePAM in each surgery

Type of wheeze (proportion)

- Viral associated wheeze
- Multi-trigger wheeze
- Atopic asthma
- Eosinophilic asthma

diagnostics

Proportion of children registered, who have had reversibility testing to confirm a diagnosis of asthma

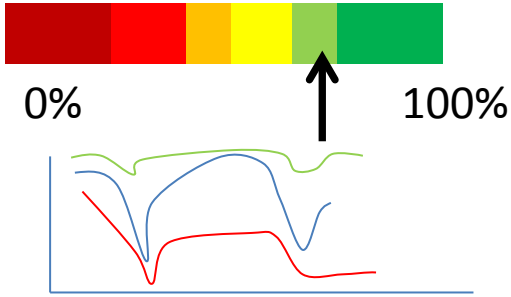
Proportion of children over 5 years of age who have had a blood eosinophil count to confirm a diagnosis of eosinophilic asthma

asthma control

PUSH statistics

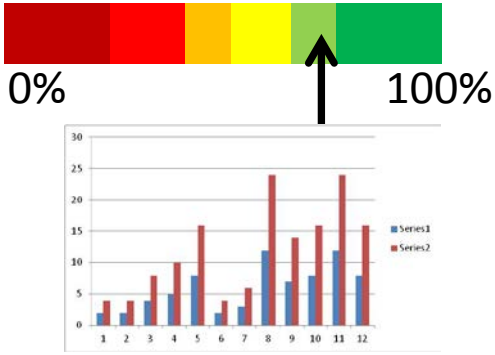
Asthma control test

Mean monthly Response



Reported Hospital admissions and GP attendances

Mean monthly Response



PUSH statistics

Monthly Asthma control test

Monthly Self reported hospital admissions and GP attendances

PUSH feedback

Generic feedback after all tests e.g. low ACT – advice box

Patient

push advice on persistent low ACT

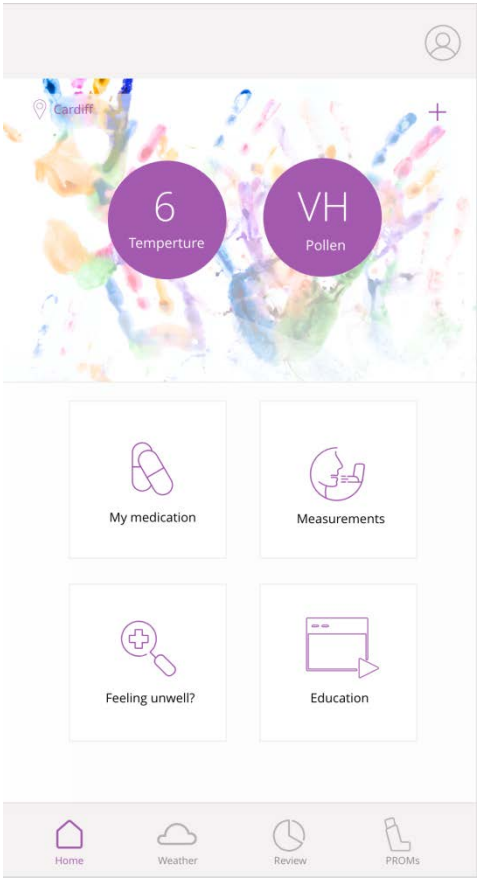
push advice to those accessing moderate/severe attack > once in 3/12

Surgery

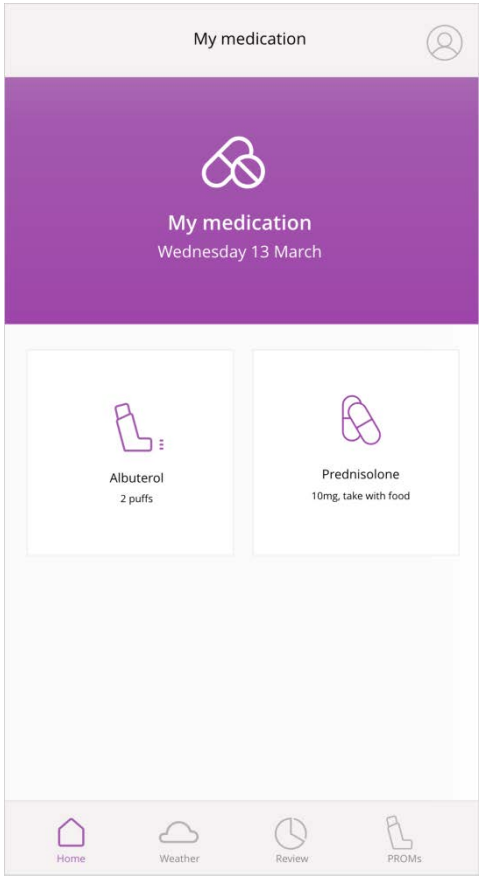
push advice to lower quartile in registration

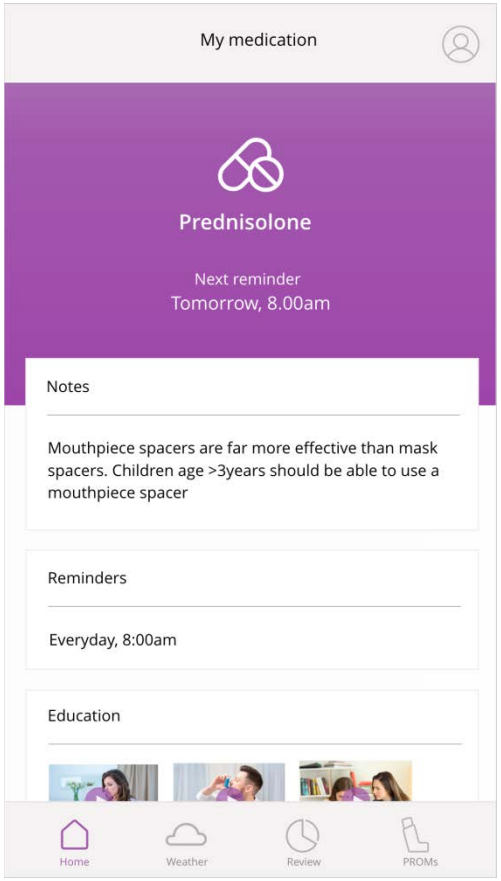
push advice to lower quartile in diagnostics

HOMEPAGE

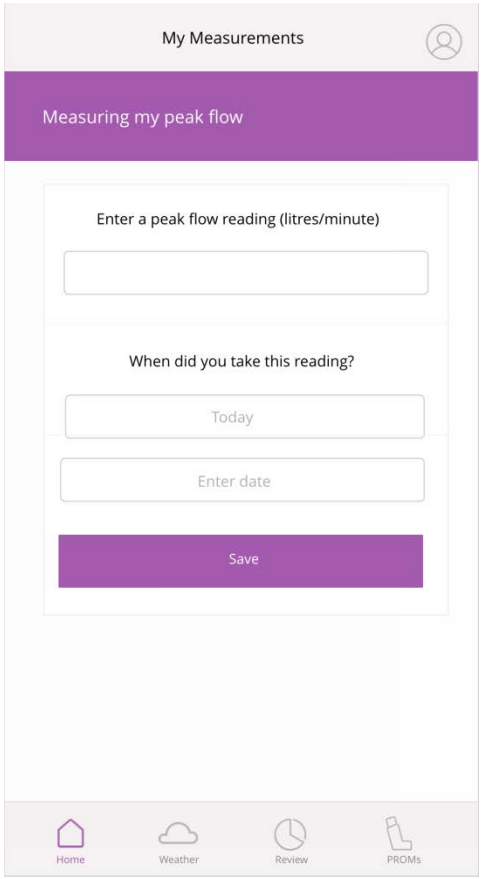


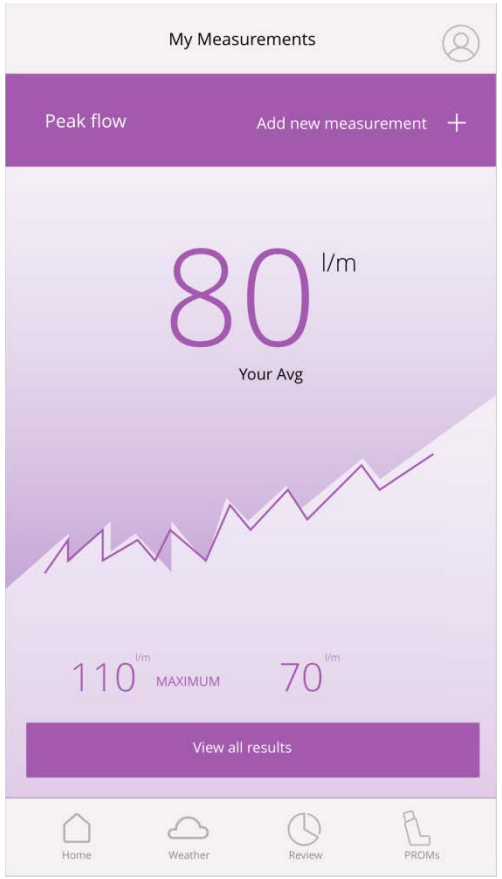
MY MEDICATION

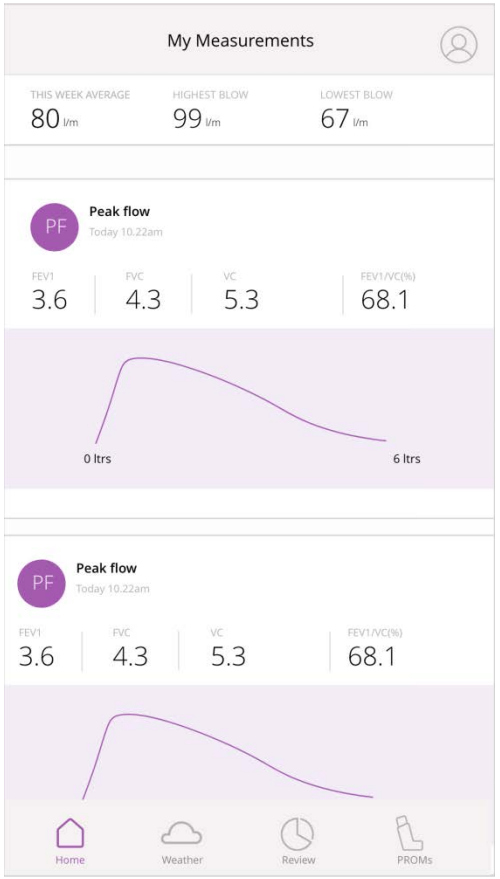




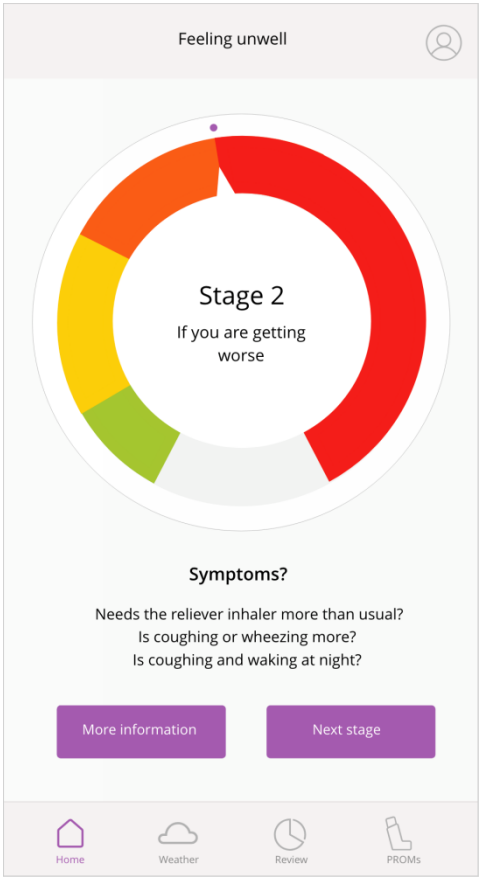
MY MEASUREMENTS

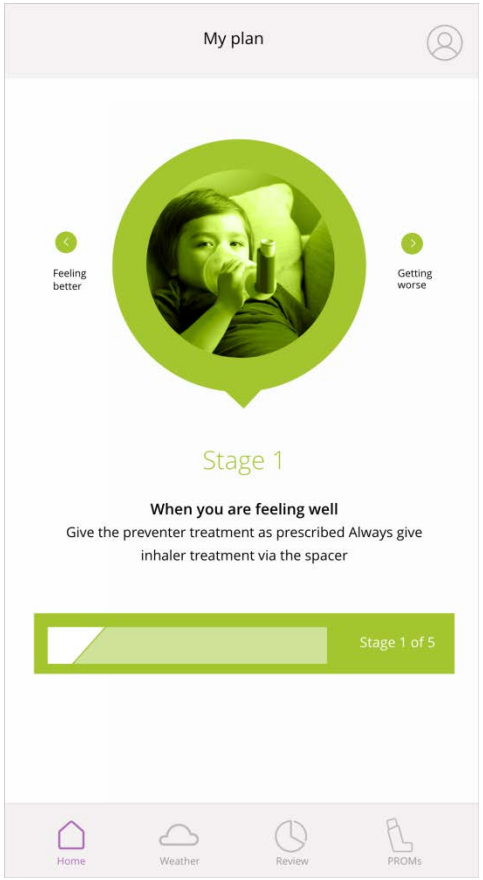


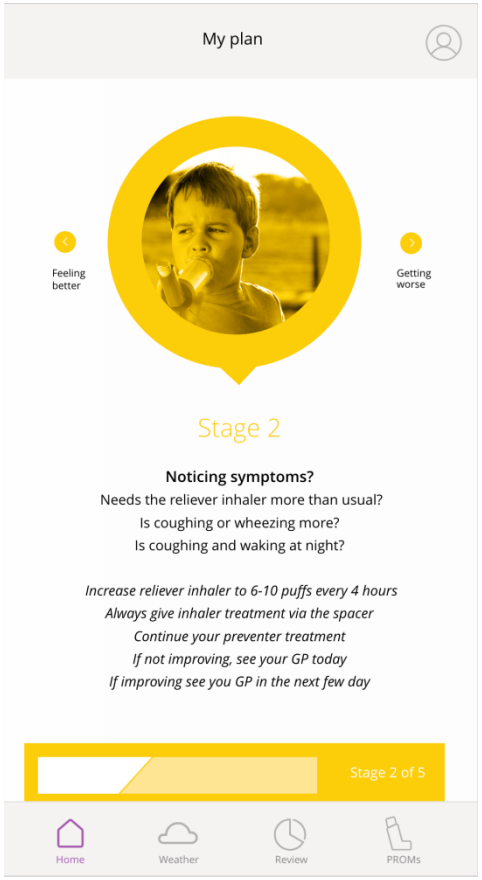




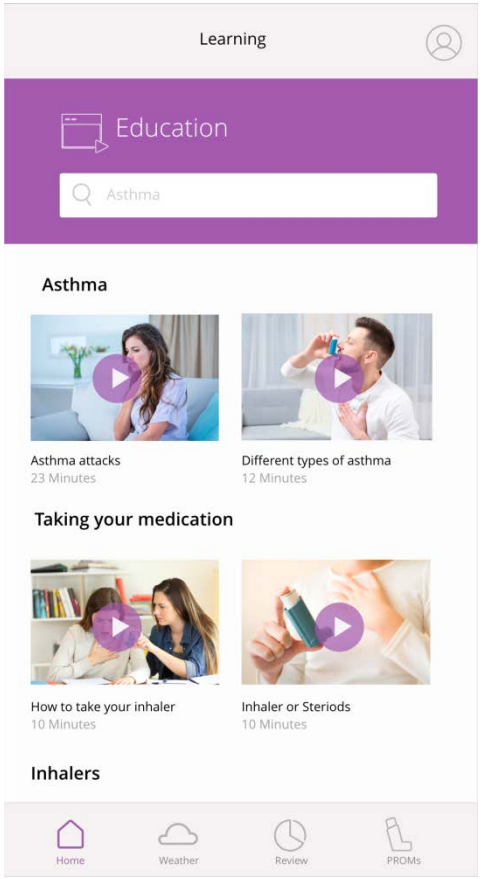
I’M UNWELL


Feeling unwell
Stage 2
If you are getting worse
Symptoms?
Needs the reliever inhaler more than usual?
Is coughing or wheezing more?
Is coughing and waking at night?
More information
Next stage
Home
Weather
Review
PROMs

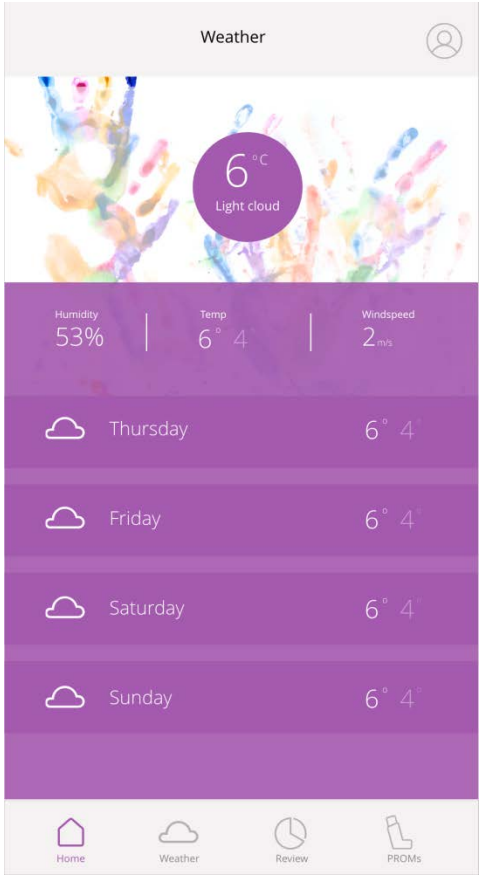

My plan
Feeling better
Getting worse
Stage 1
When you are feeling well
Give the preventer treatment as prescribed Always give inhaler treatment via the spacer
Stage 1 of 5
Home
Weather
Review
PROMs


My plan
Feeling better
Getting worse
Stage 2
Noticing symptoms?
Needs the reliever inhaler more than usual?
Is coughing or wheezing more?
Is coughing and waking at night?
Increase reliever inhaler to 6-10 puffs every 4 hours
Always give inhaler treatment via the spacer
Continue your preventer treatment
If not improving, see your GP today
If improving see you GP in the next few day
Stage 2 of 5
Home
Weather
Review
PROMs

LEARNING



WEATHER



Respiratory Health Implementation Group

child Health

Respiratory Health Implementation Group

South Wales Paediatric Respiratory Network

October 2018: Asthma Audit Cycle 1.0

Add another patient

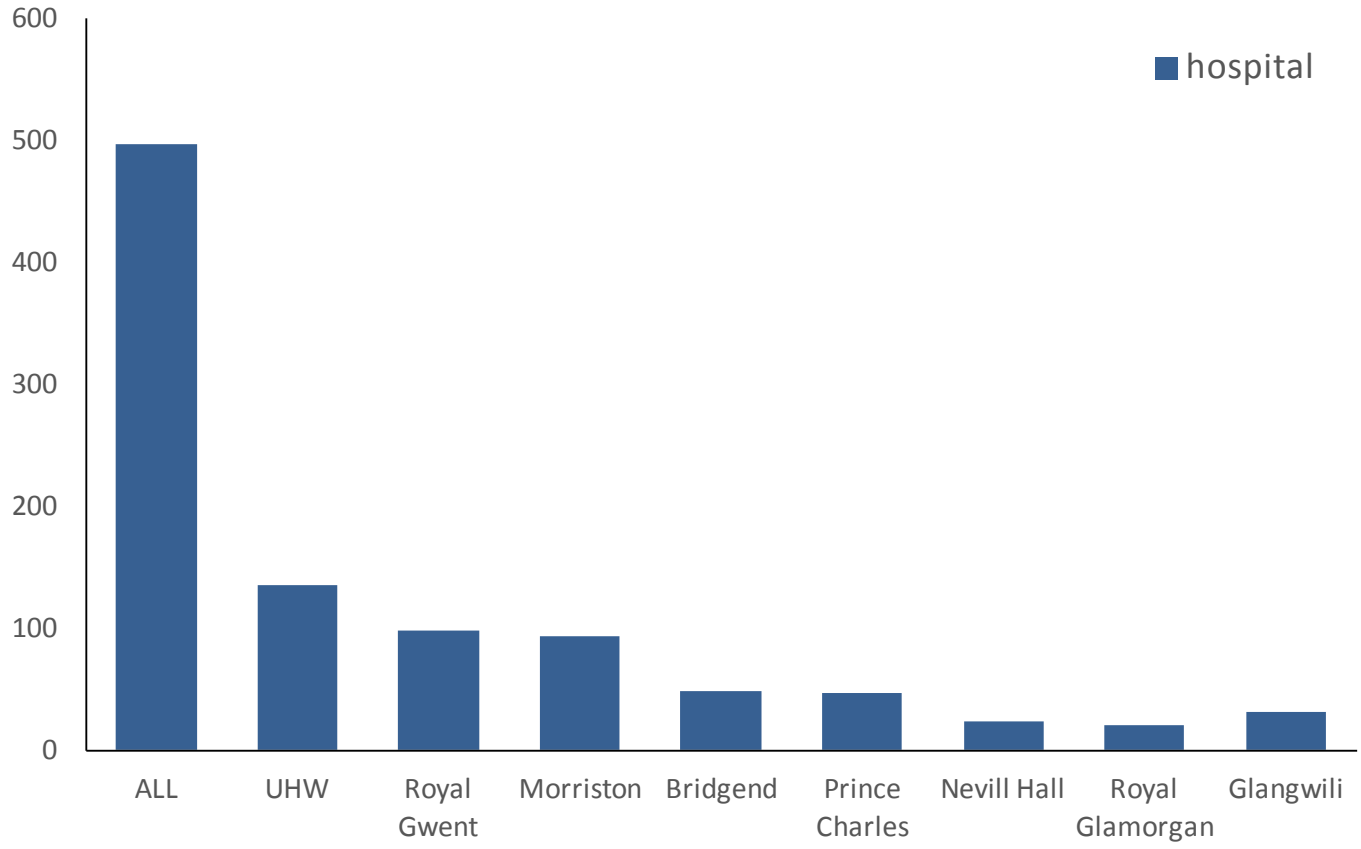
Save Patient Record

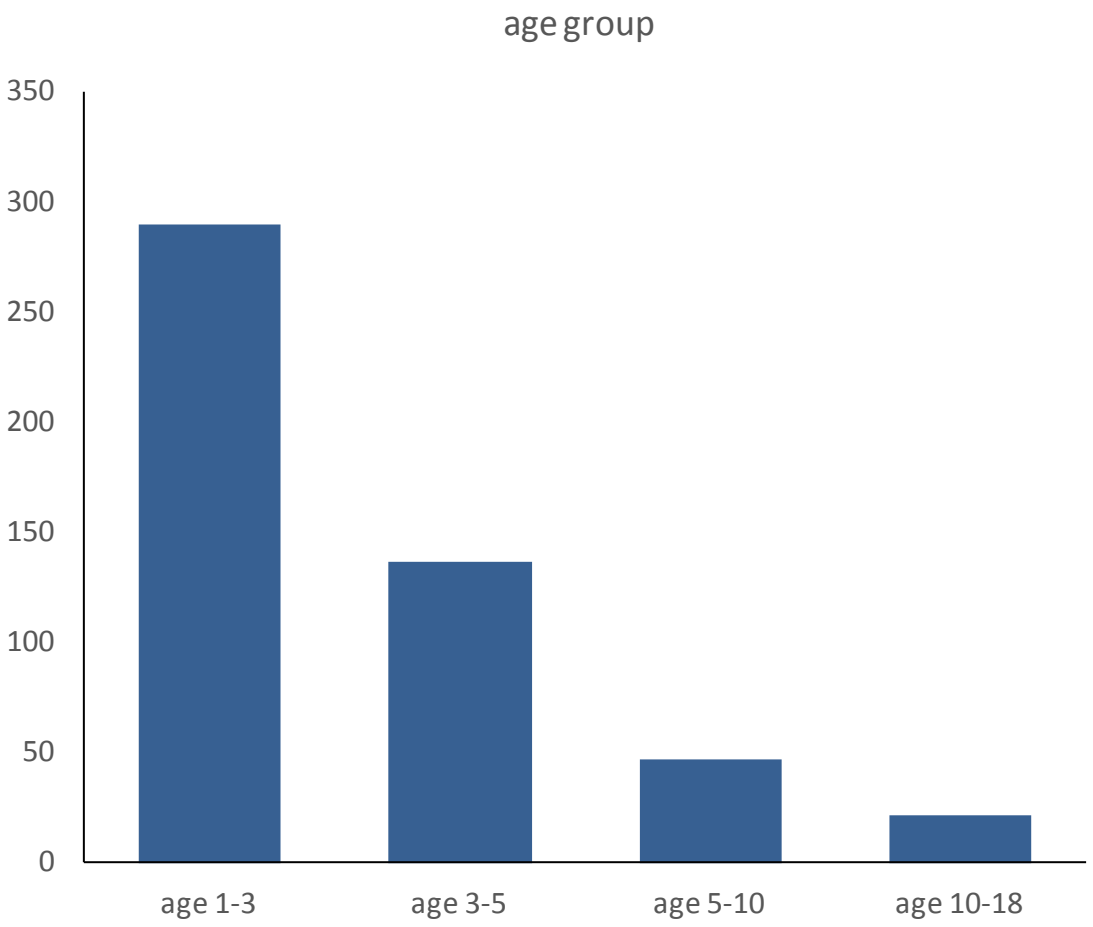
Number of patients on your database: 1

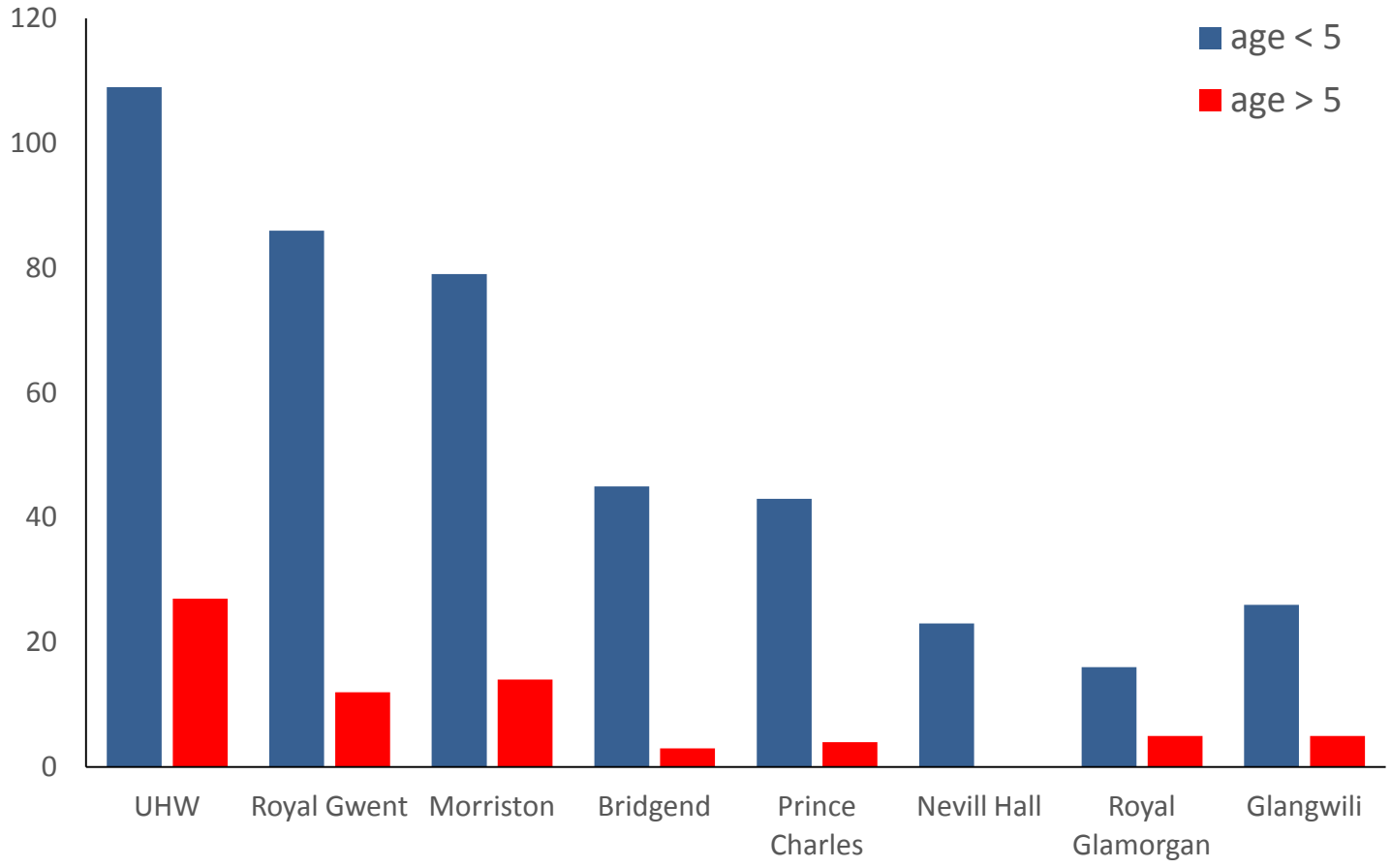
Close database

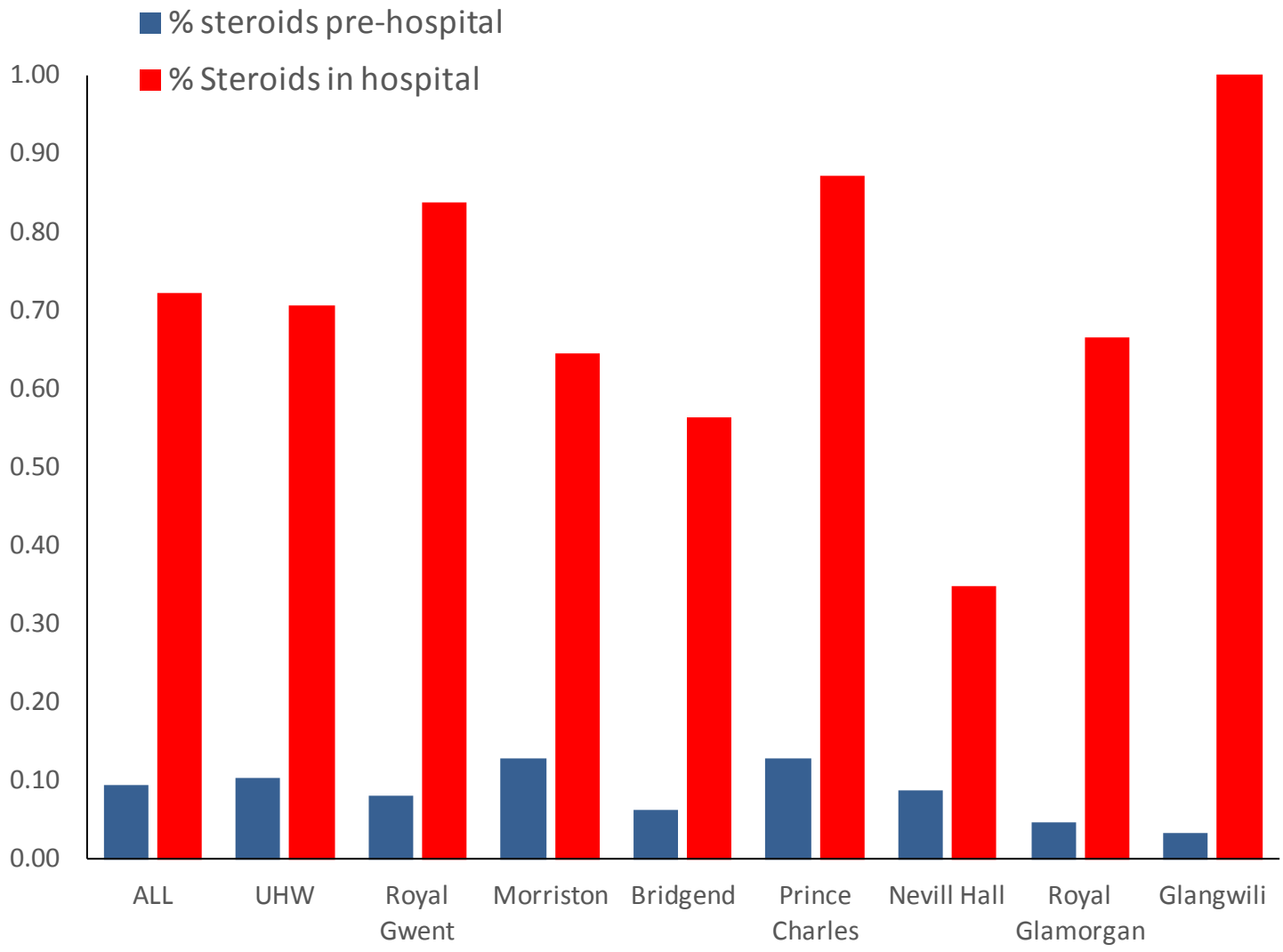
Patient initials	
Date of birth	
Hospital number	
Postcode	
Pre-existing wheeze diagnosis	
Best fit wheeze diagnosis	
GP asthma review in last 12 months	
Patient has an asthma care plan already	
Patient brought asthma care plan with them	
Date of last admission	
Number of A/E attendances in last 12 months	
Number of admissions in last 12 months	
Existing secondary care follow up	
Family smokers	
Current inhaled steroid therapy	
Montelukast	
Oral theophylline	
Omalizumab	
Daily oral prednisolone	
Maintenance azithromycin	
Home steroid Rescue Pack	

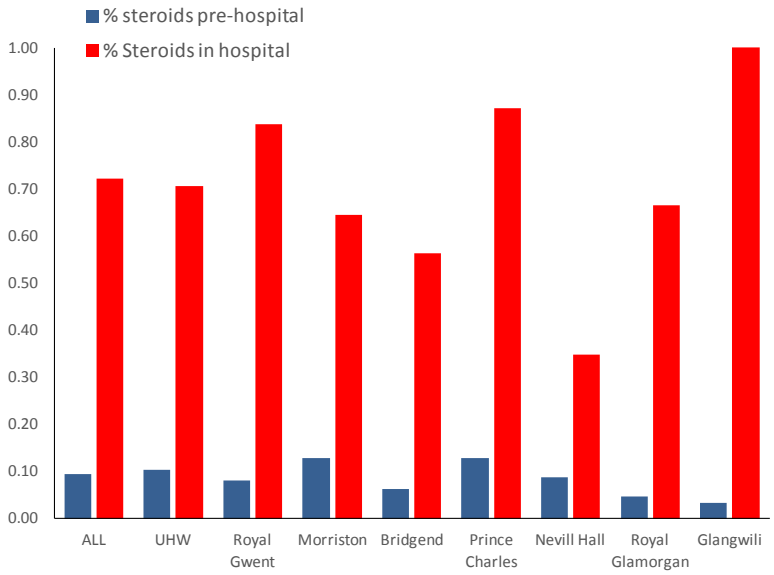
Date of admission	
Route to hospital	
Steroids given pre-hospital	
Time of arrival (triage)	
Steroids prescribed in hospital	
Time of first hospital steroid administration	
First steroid: preparation used	
First steroid: tolerated or vomited	
If vomited, time of Repeat First dose	
Repeat steroid: preparation used	
Repeat steroid: tolerated or vomited	
Initial management with nebulisers or inhalers	
Time of first salbutamol treatment	
Nebulised medication used	
Time of IV salbutamol bolus, if given	
Time IV aminophylline load and IVI started, if given	
Time salbutamol IVI started, if given	
Time of IV magnesium bolus, if given	
Duration of IVI aminophylline (hours)	
Duration of IVI salbutamol (hours)	
Duration of one hourly nebulisers (hours)	
Duration of any nebulisers (hours)	
Chest Xray performed	
Treatment antibiotics started	
HDU or PICU	
Asthma care plan reviewed or provided	
Asthma training including inhaler technique	
Date of discharge	
Time medically fit for discharge	
Follow up with GP within 48 hours arranged	
Secondary care follow up within 28 days arranged	


600
500
400
300
200
100
0
hospital
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

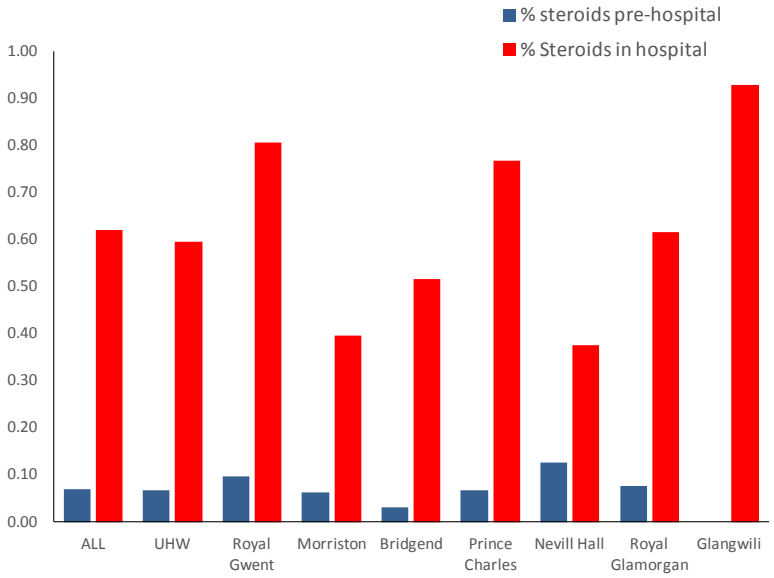

age group
350
300
250
200
150
100
50
0
age 1-3
age 3-5
age 5-10
age 10-18


120
100
80
60
40
20
0
age < 5
age > 5
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

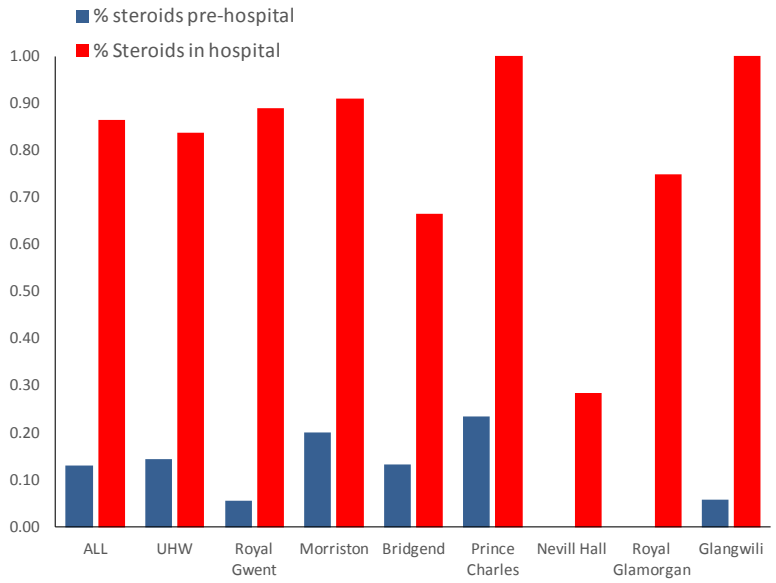

% steroids pre-hospital
% Steroids in hospital
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

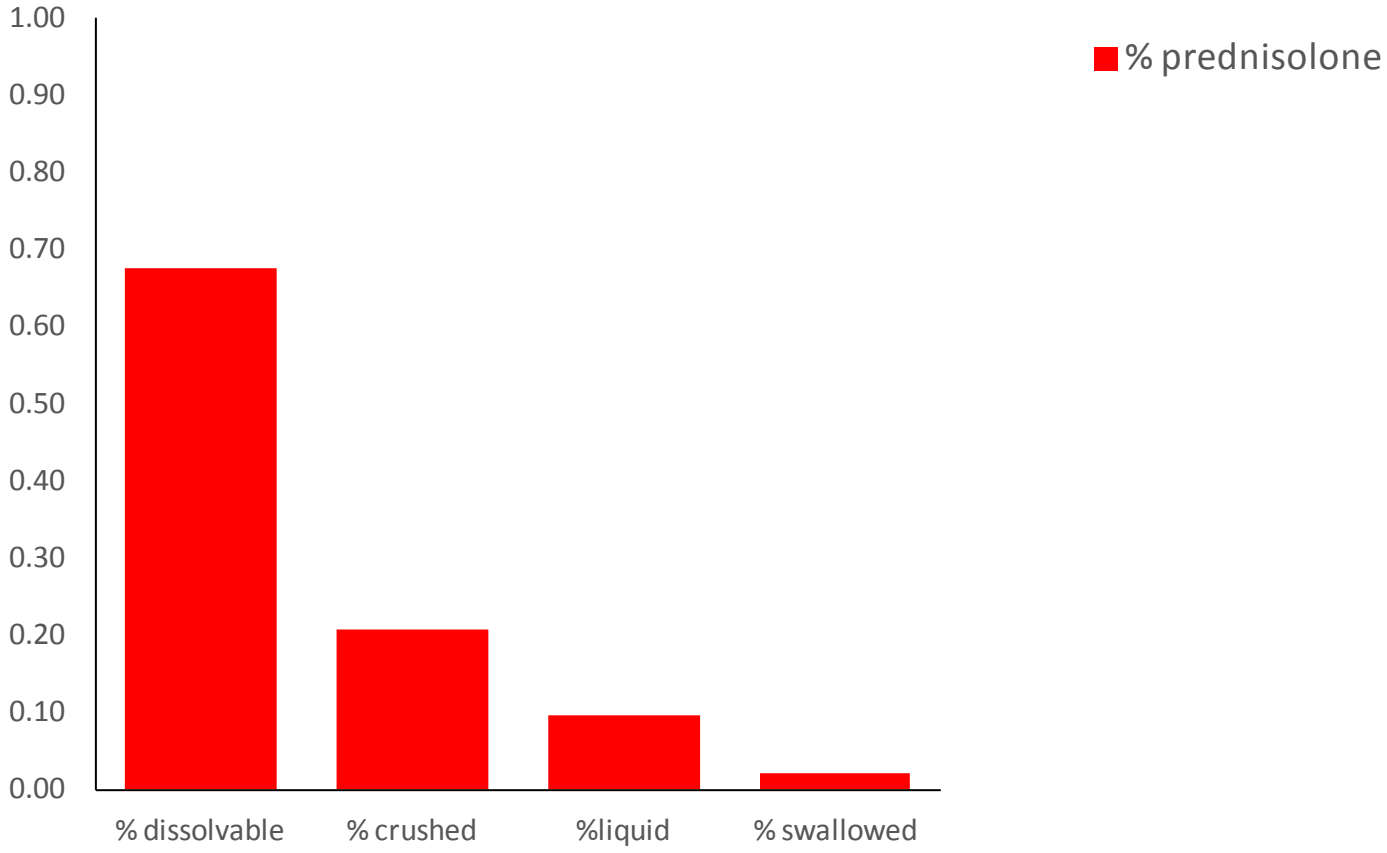

% steroids pre-hospital
% Steroids in hospital
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

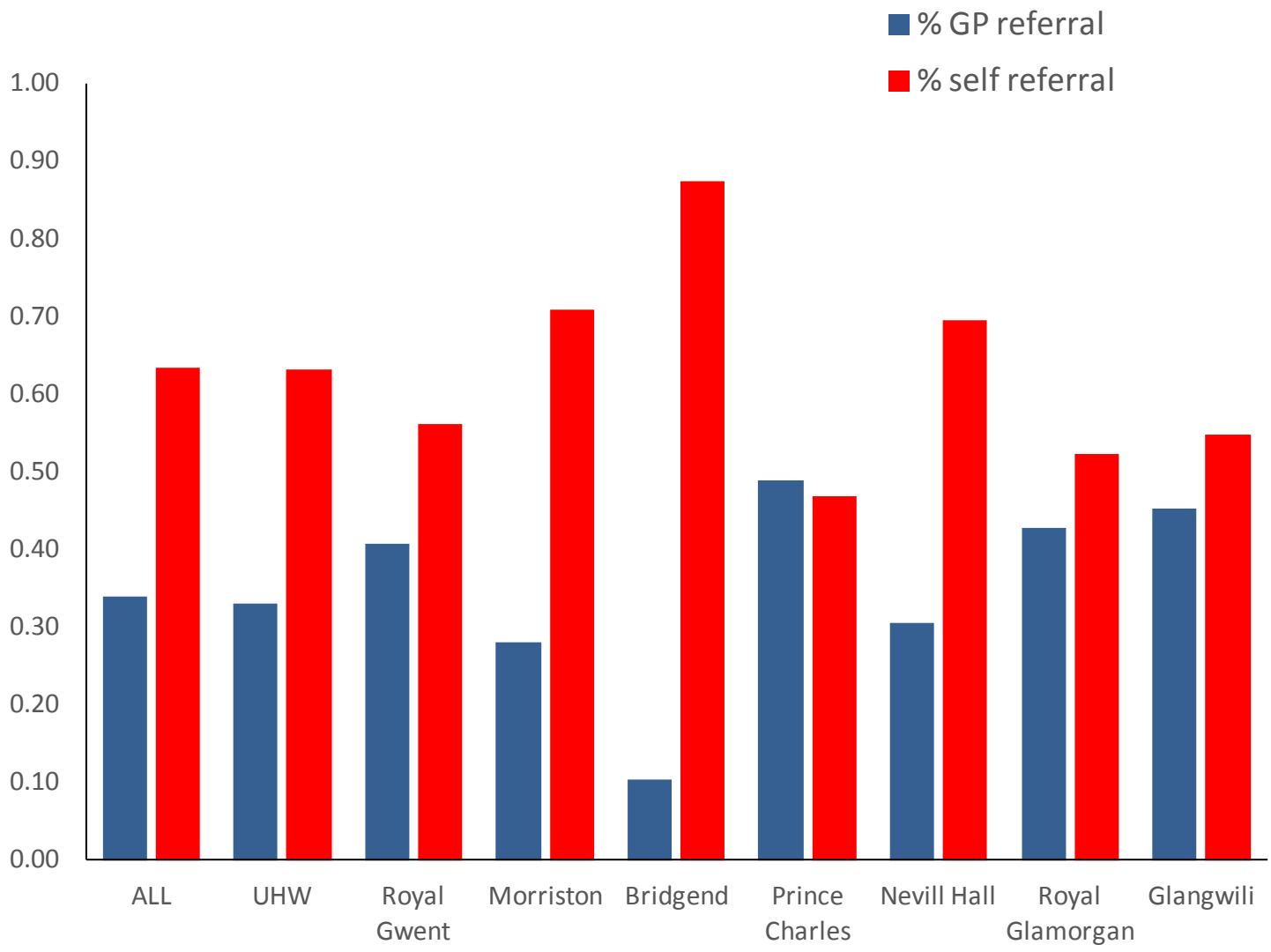
Age <3

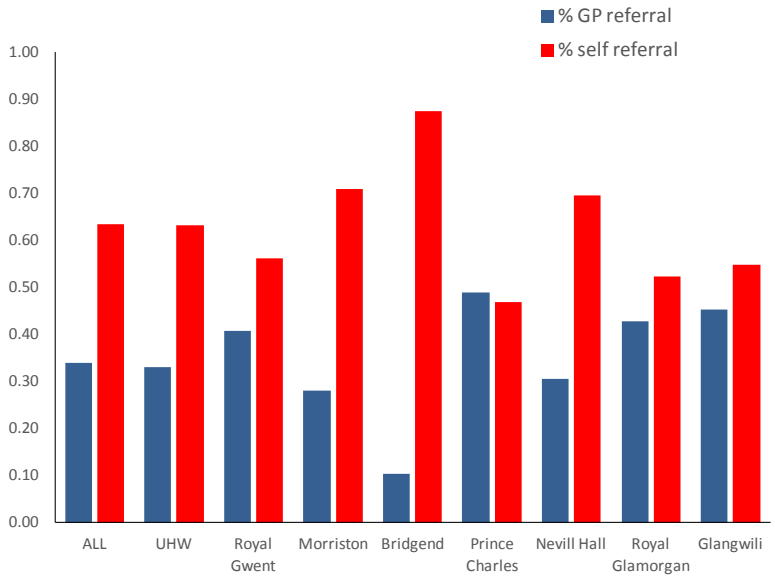

% steroids pre-hospital
% Steroids in hospital
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

Age >3


% steroids pre-hospital
% Steroids in hospital
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

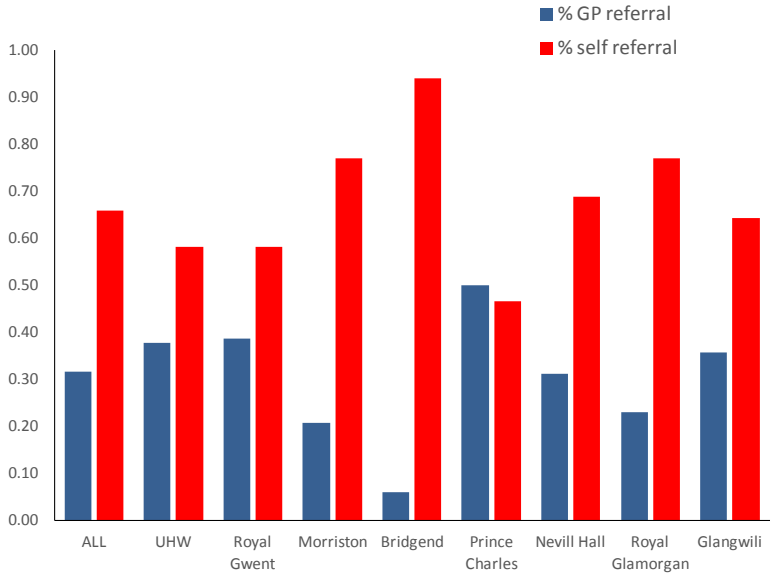

1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
% dissolvable
% crushed
%liquid
% swallowed
% prednisolone

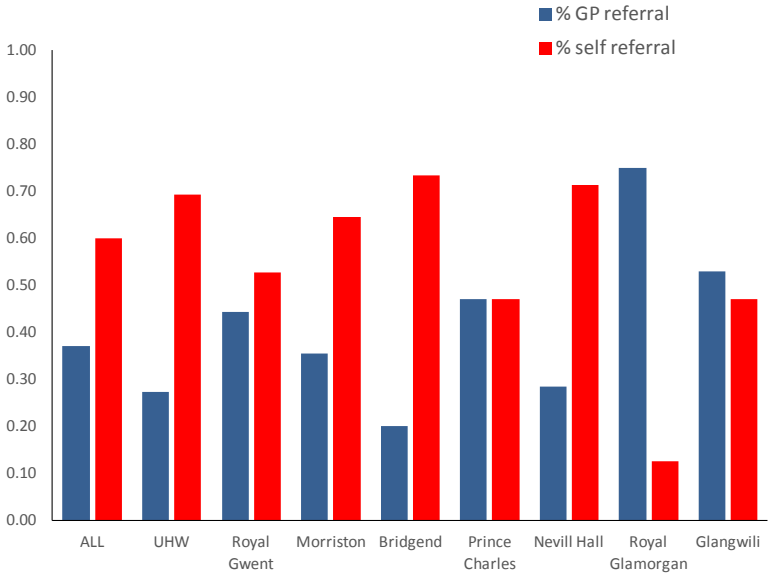

% GP referral
% self referral
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

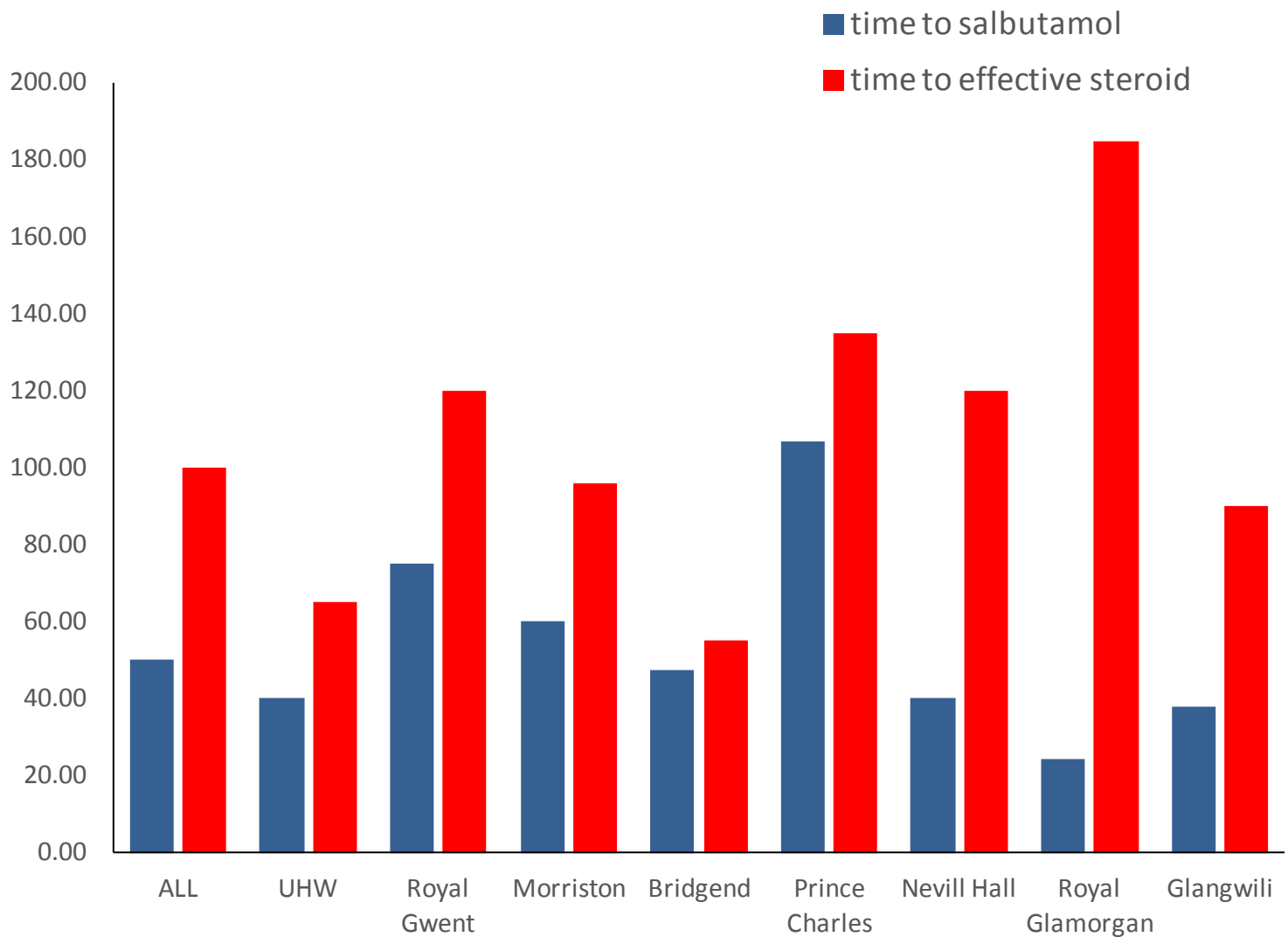

% GP referral
% self referral
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

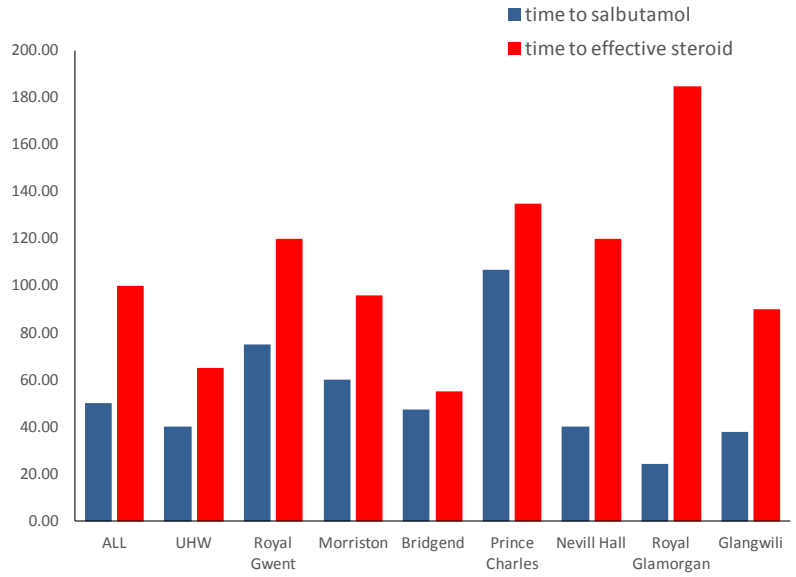
Age <3

Age >3


% GP referral
% self referral
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili


% GP referral
% self referral
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili


time to salbutamol
time to effective steroid
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
ALL
UHW
Royal Gwent
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili


time to salbutamol
time to effective steroid
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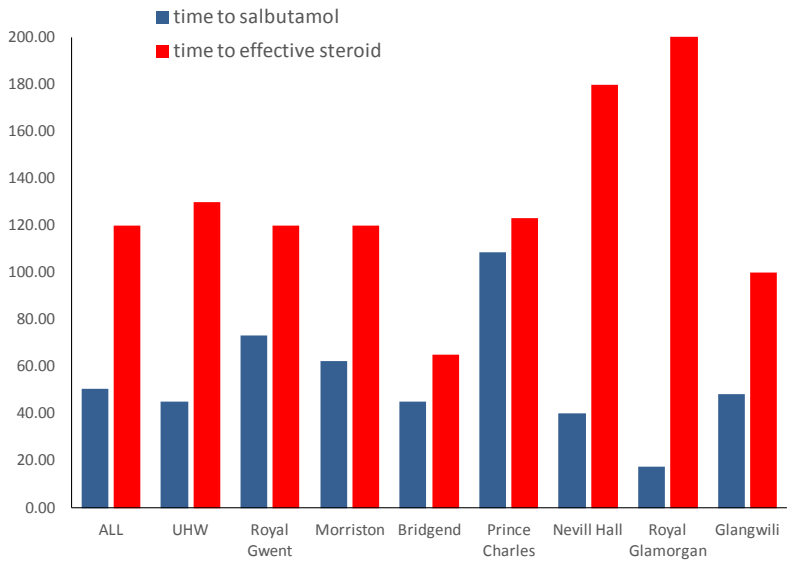
Morriston
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

Age <3


time to salbutamol
time to effective steroid
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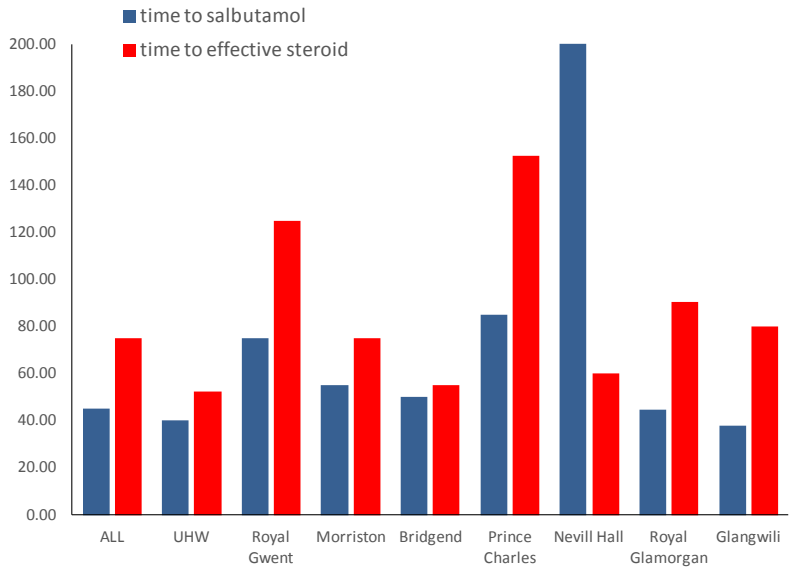
Bridgend
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

Age >3


time to salbutamol
time to effective steroid
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Prince Charles
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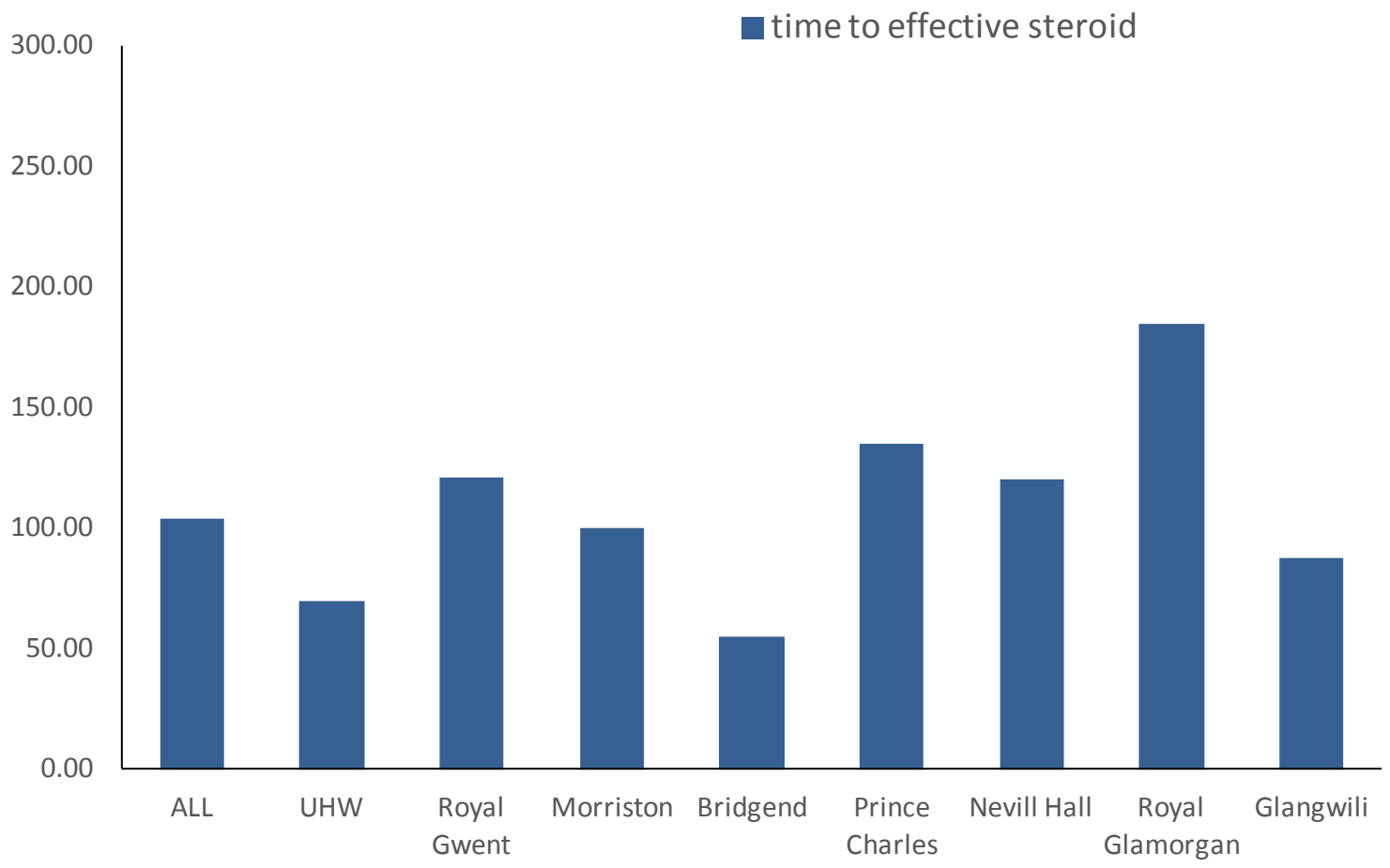
Glangwili


time to effective steroid
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Prince Charles
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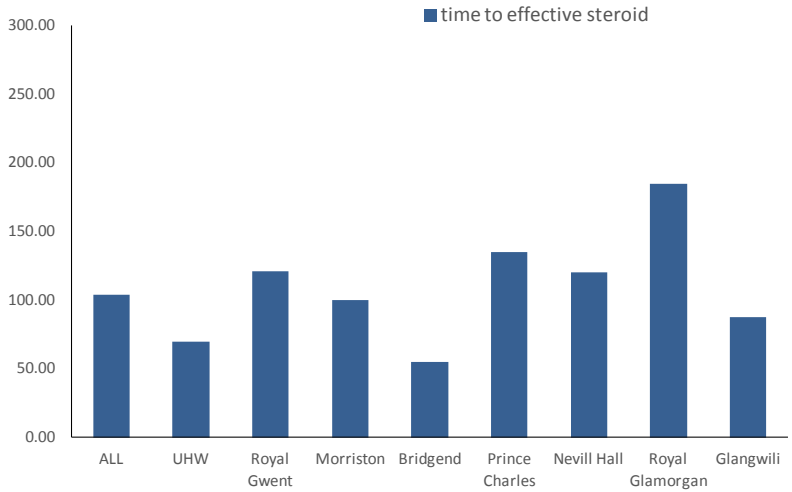
Glangwili


time to effective steroid
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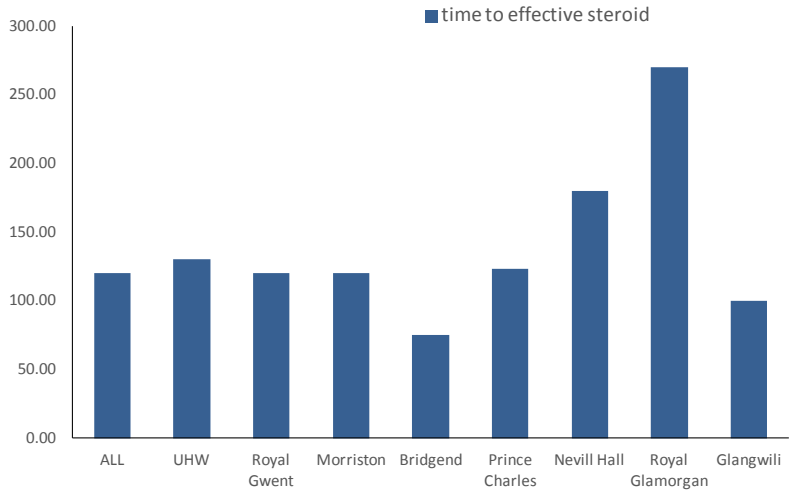
Glangwili

Age <3


time to effective steroid
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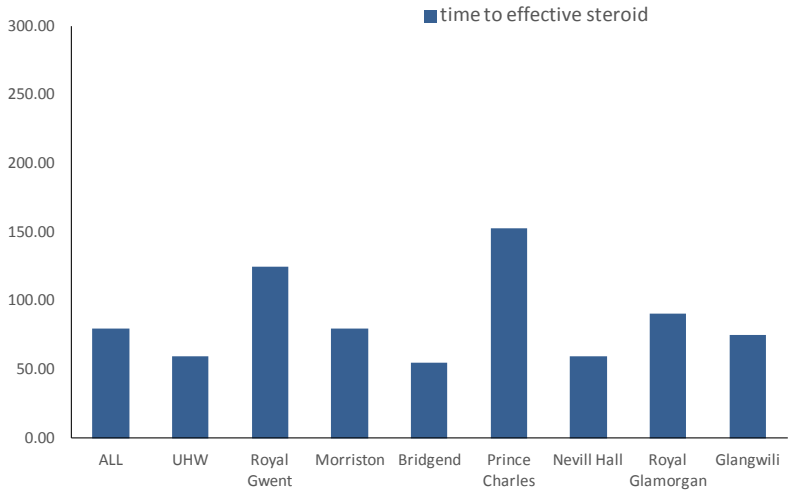
Prince Charles
Nevill Hall
Royal Glamorgan
Glangwili

Age >3


time to effective steroid
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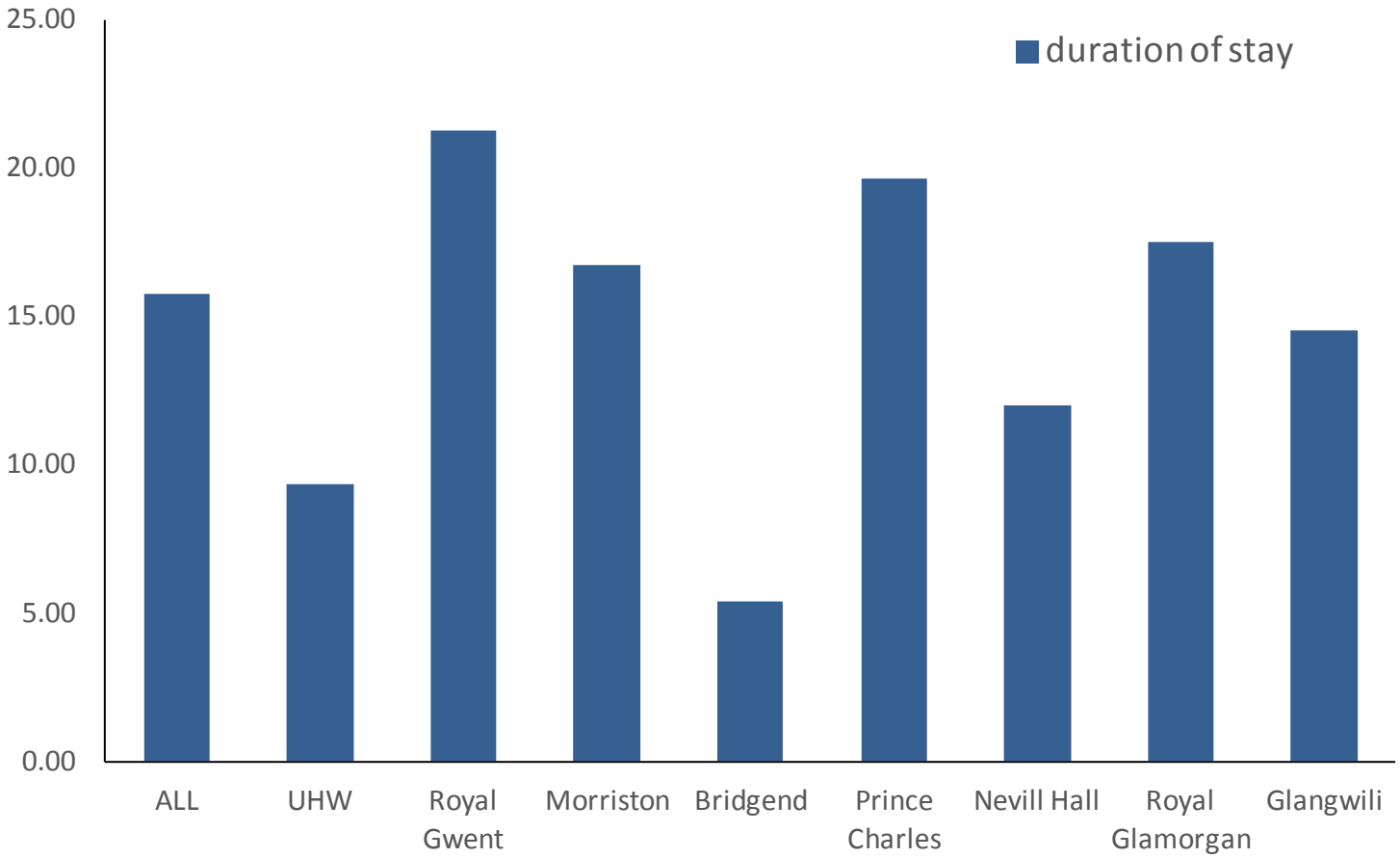
Glangwili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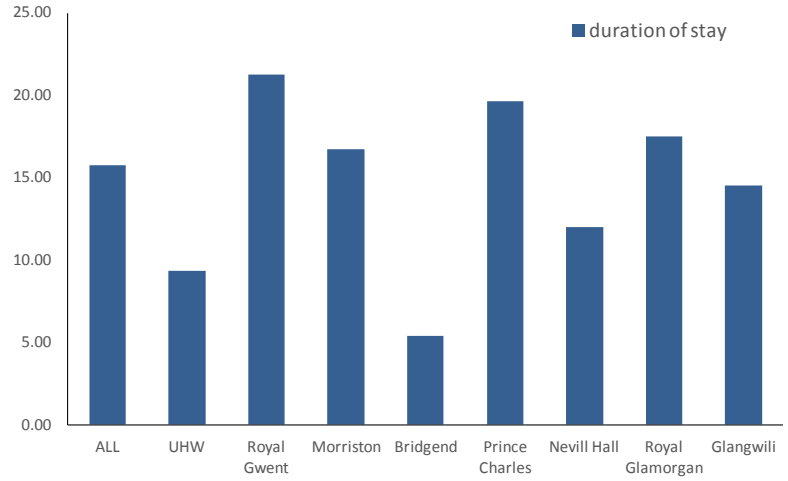
Glangwili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duration of stay
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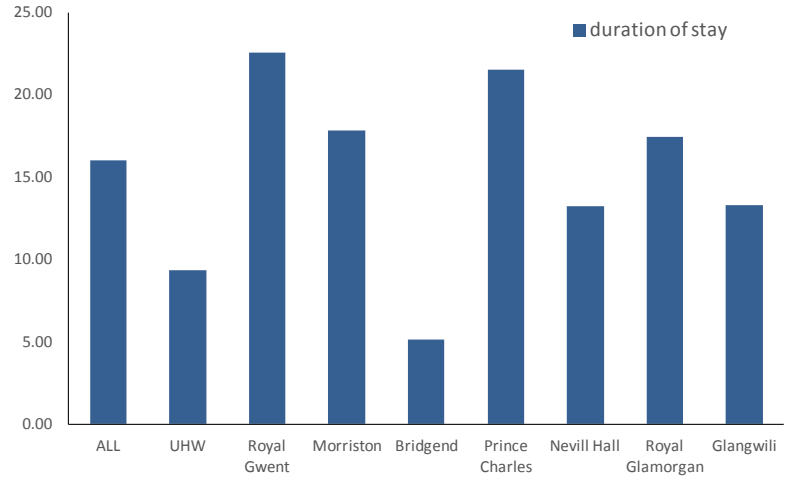
Glangwili

Age <3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duration of stay
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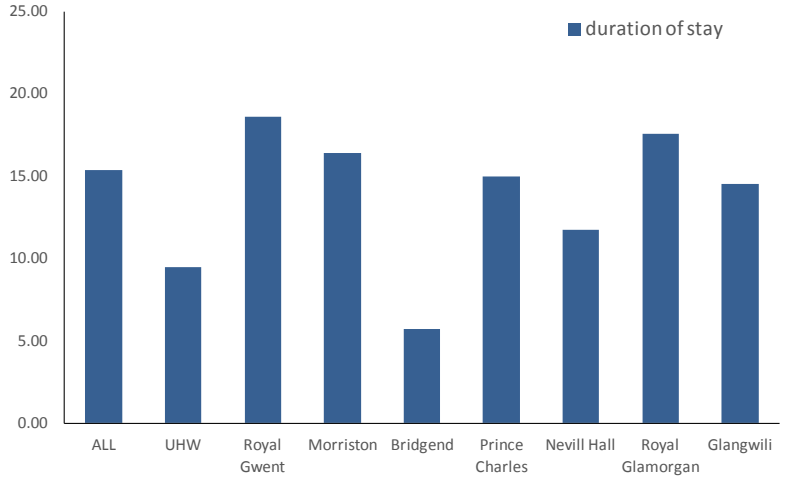
Royal Glamorgan
Glangwili

Age >3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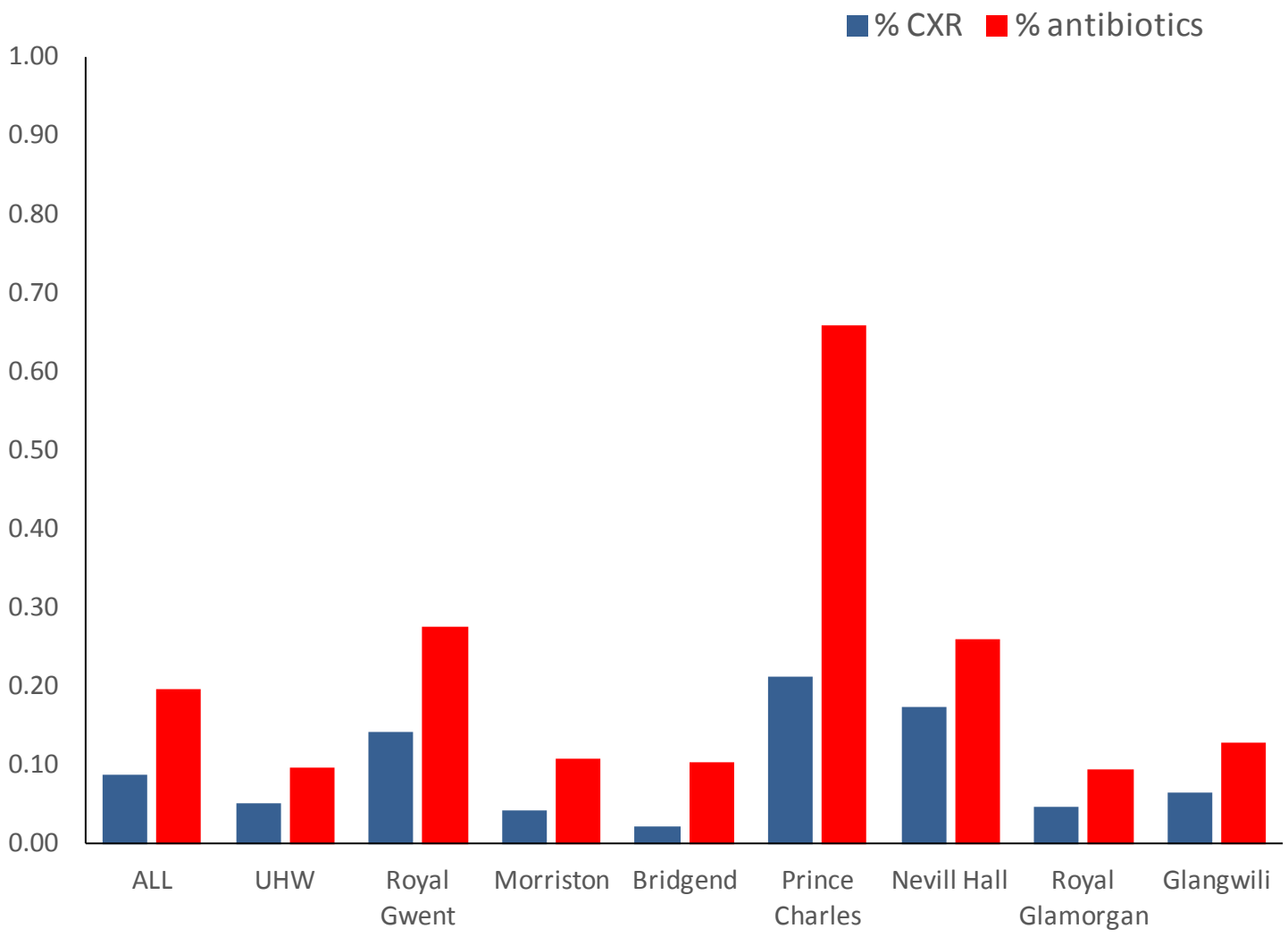
% CXR
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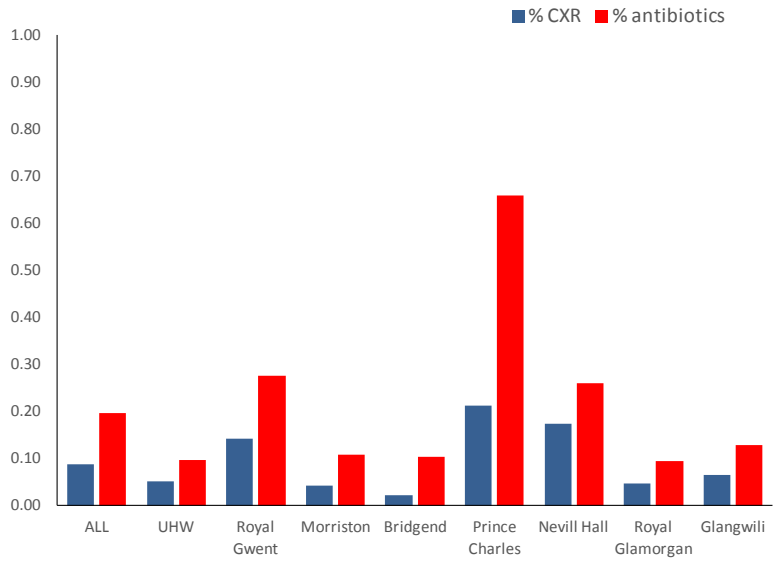
Glangwili


% CXR
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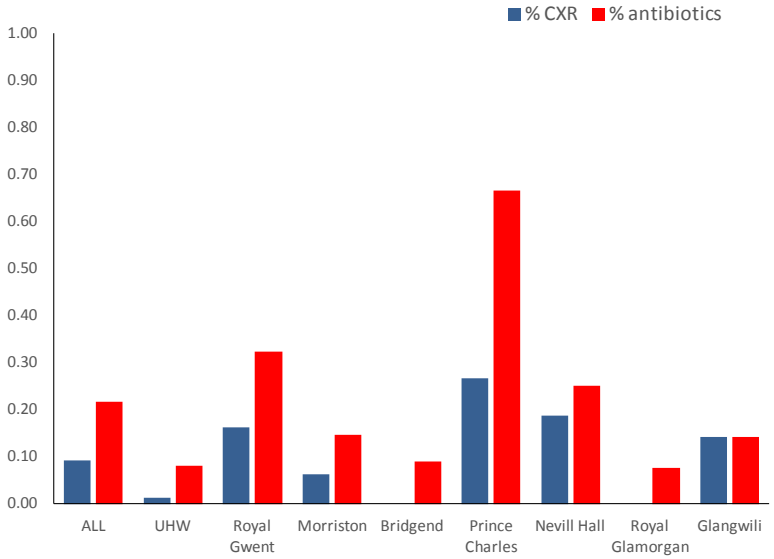
Age <3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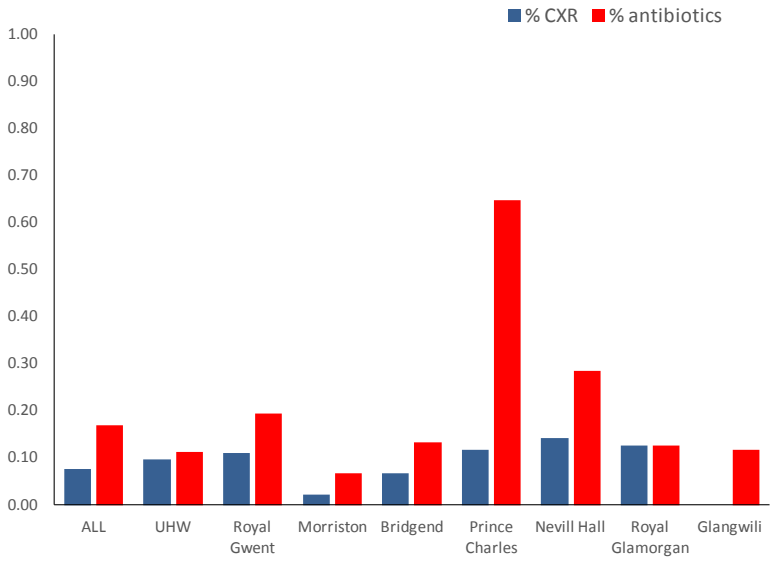
Age >3


% CXR
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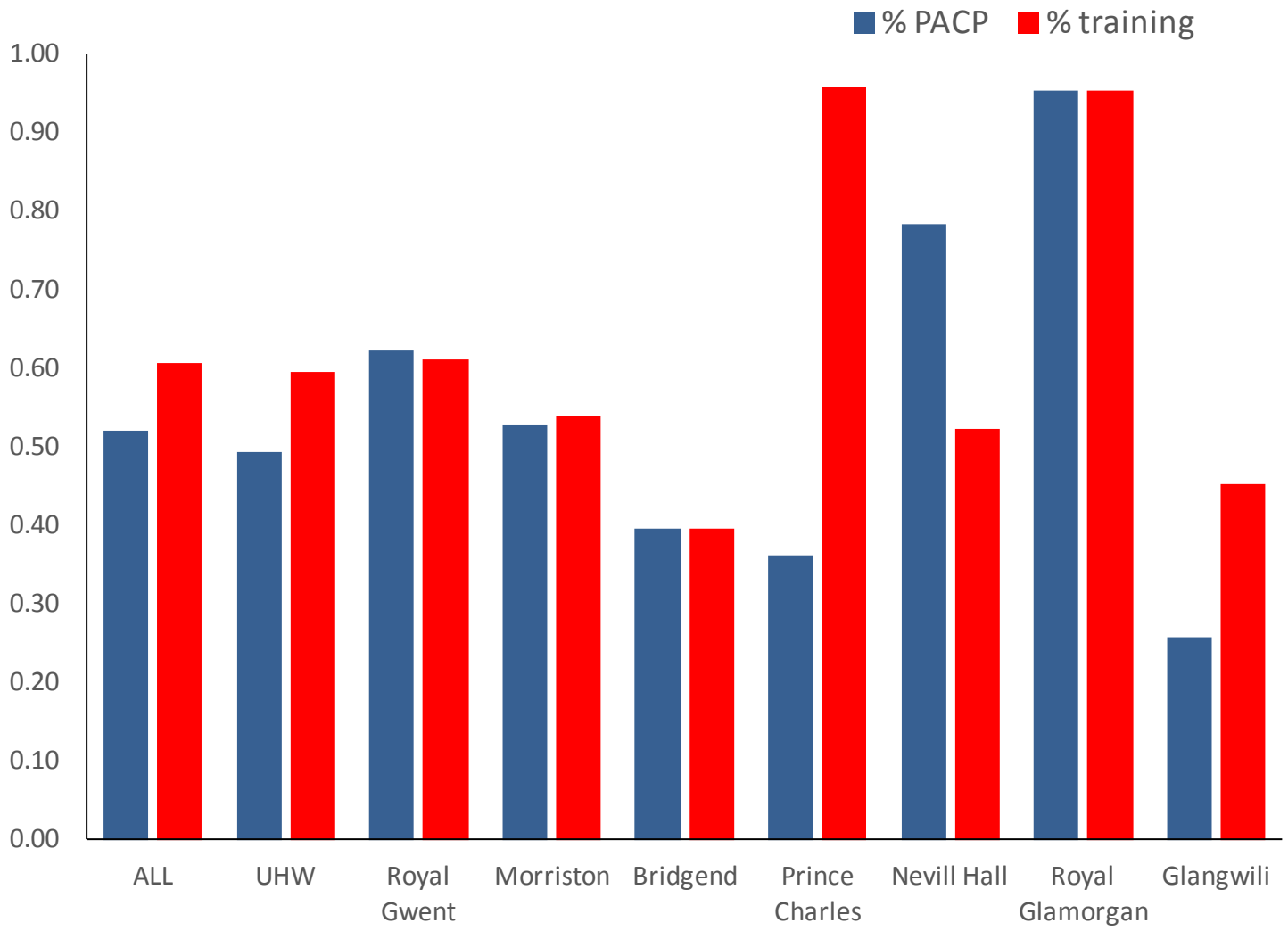
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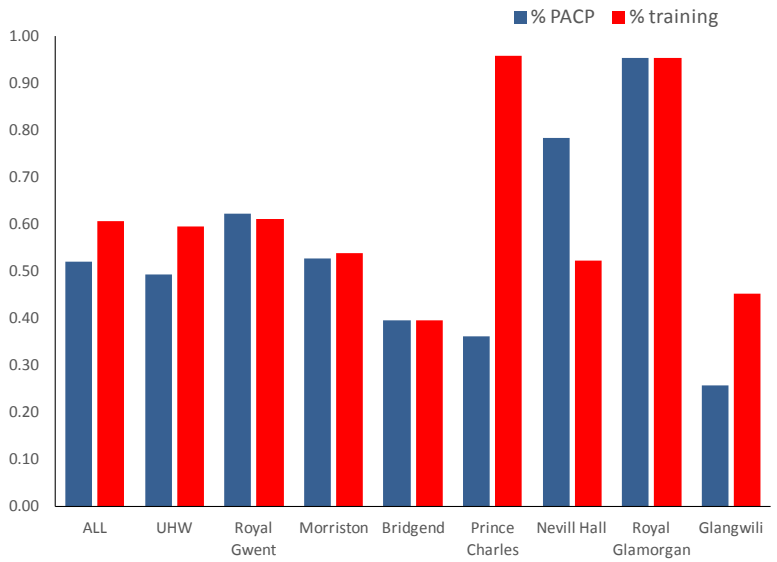
% PACP
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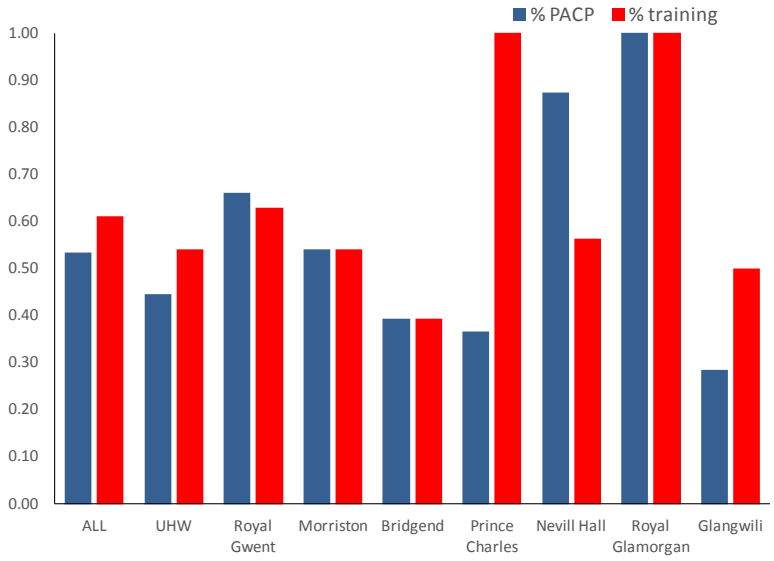
Royal Glamorgan
Glangwili

Age <3

Age >3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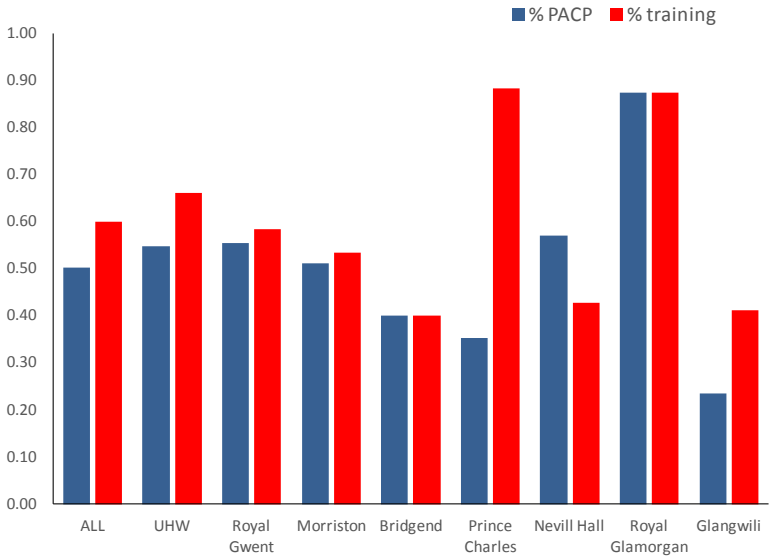
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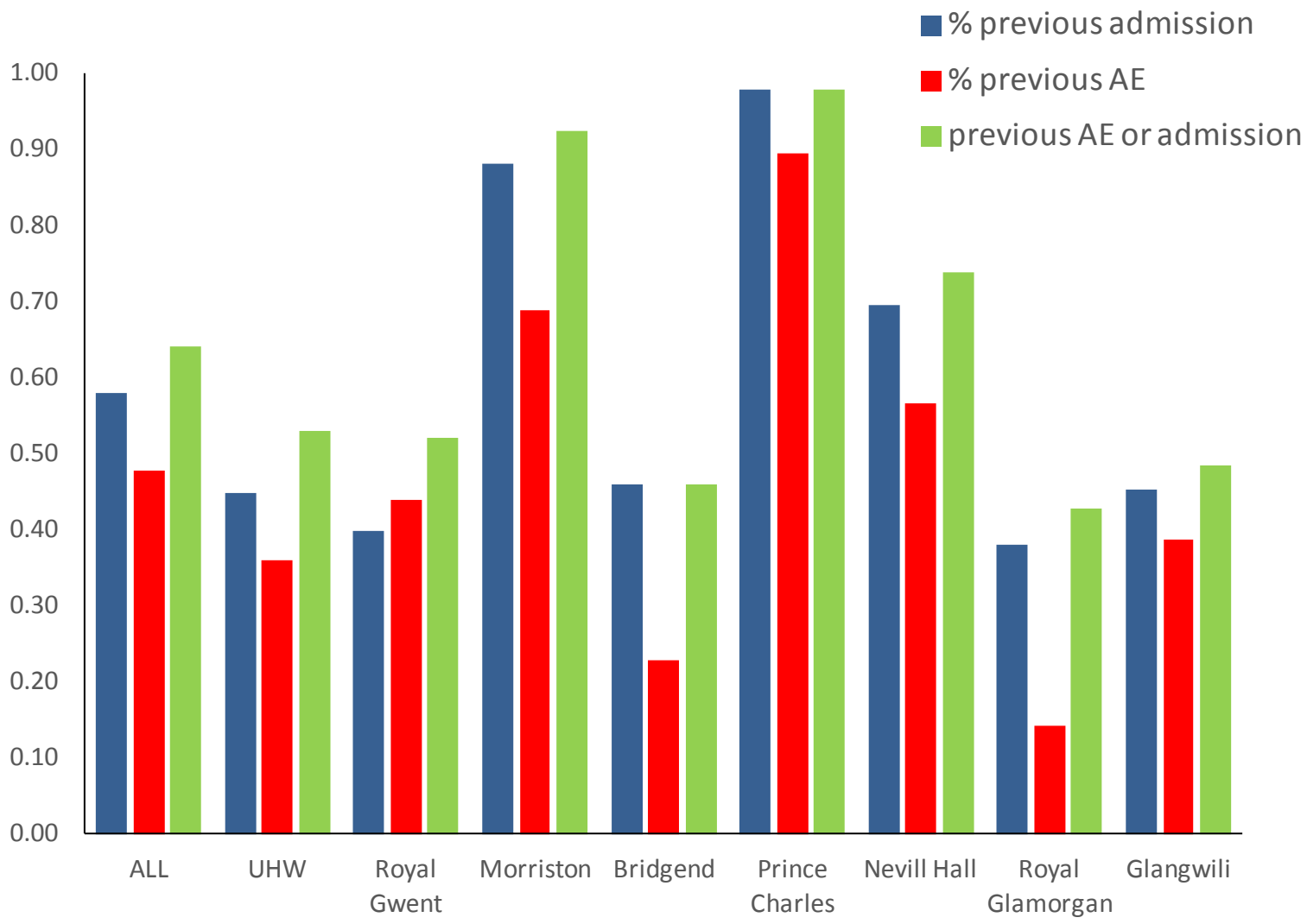
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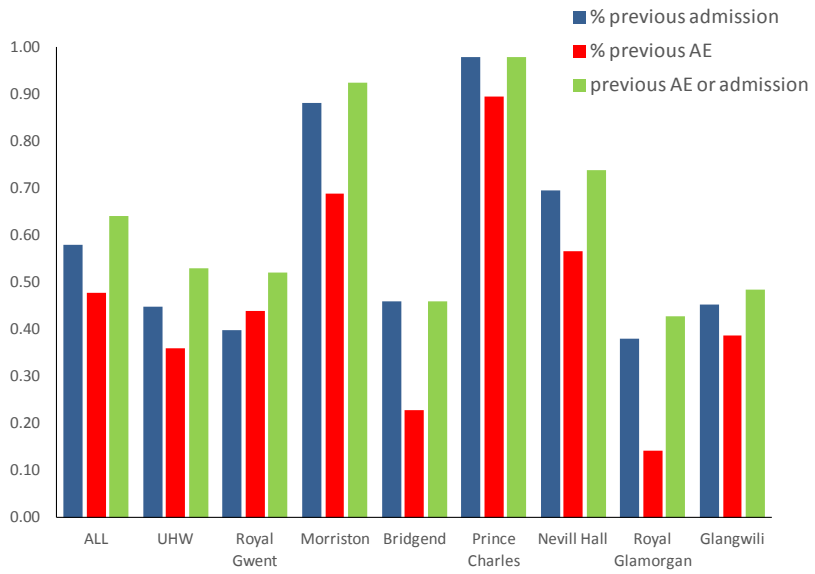
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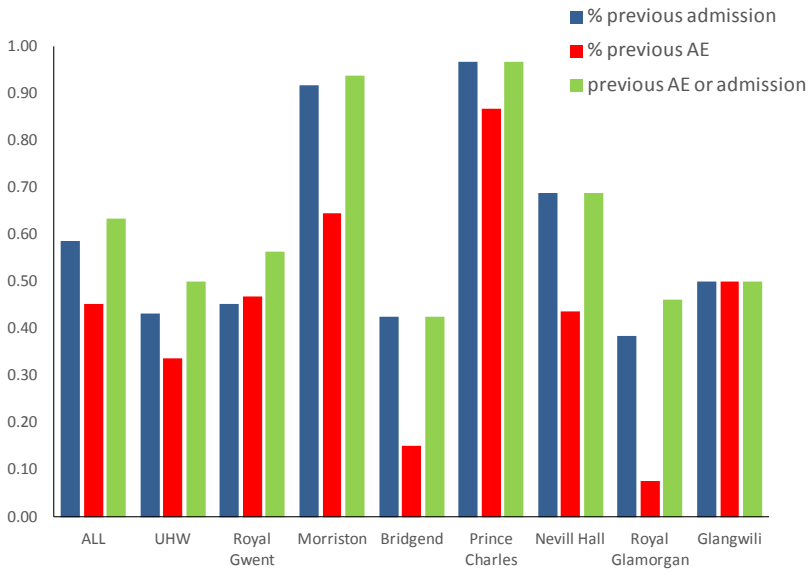
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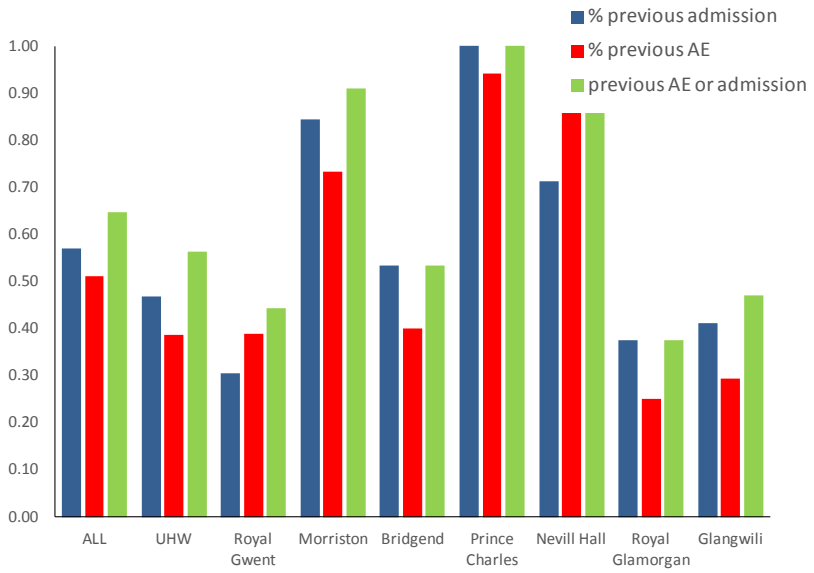
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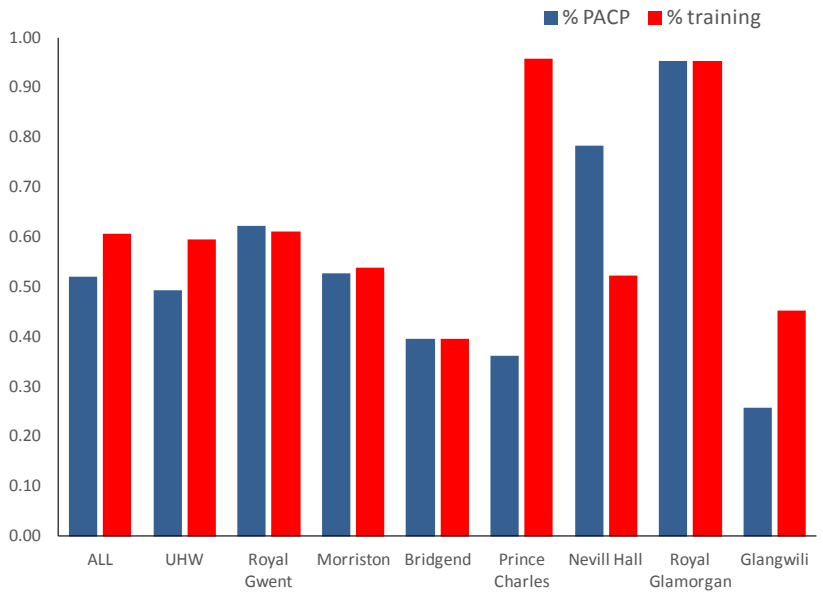
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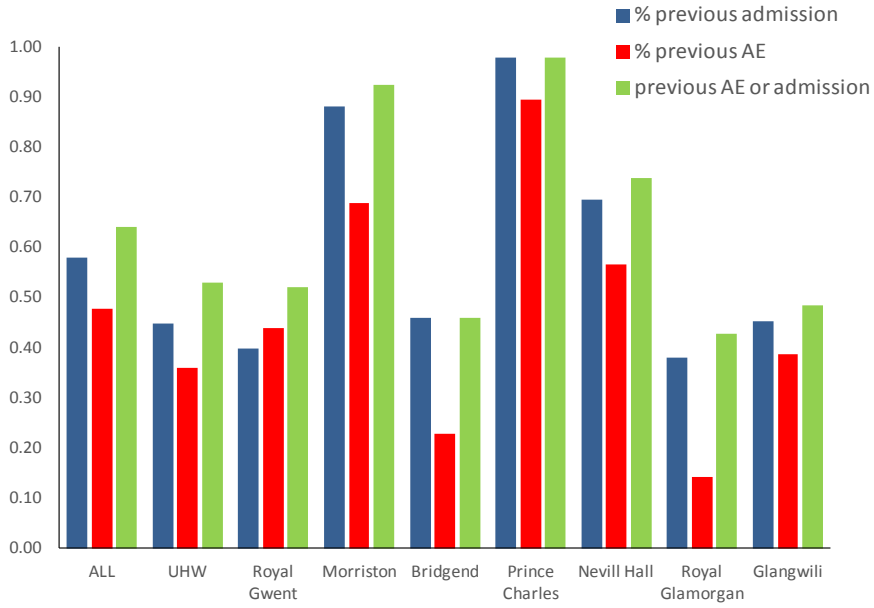
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Royal Glamorgan
Glangwili

Reflect

Age groups
Duration of stay
Who gets steroids
Time to steroids

CXR
Antibiotics
Care plans
Training
Repeated admission

Personal outliers – personal practise ? change

National Asthma and COPD Audit Programme (NACAP): secondary care workstream – paediatric asthma

The secondary care (paediatric asthma) workstream, which is due to commence in June 2019, will comprise two parts: a continuous clinical audit of people admitted to hospital paediatric services in England, Scotland and Wales with asthma attacks, and a snapshot audit of the organisation and resourcing of care.

Participation in the secondary care workstreams of the National Asthma and COPD Audit Programme (NACAP) is a requisite of trust quality accounts.

What we are doing

Paediatric asthma - continuous clinical audit

This audit aims to collect information on all people admitted to hospital paediatric services with asthma attacks. Admission data, obtained from patient case notes, will be collected, and entered into a secure and bespoke audit web-tool.

Paediatric asthma - organisational audit

A biennial snapshot organisational audit which will collect data on the organisation and resource of services, with data collection via the bespoke audit web-tool.

Details

Status: In progress

Date: 1 March 2018

Get involved

National Asthma and COPD Audit Programme

Telephone: +44 (0)20 3075 1526

Email: nacap@rcplondon.ac.uk

Associated projects

National Asthma and COPD Audit Programme (NACAP)

National Asthma and COPD Audit Programme (NACAP): primary care workstream

National Asthma and COPD Audit Programme (NACAP): secondary care workstream – adult asthma