Understanding Infobutton Standards: How to link EHRs and CDS

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Mute/Unmute: *6
Understanding Infobutton Standards: How to link EHRs and CDS

Please Note:

Please mute your phone unless asking a question to eliminate background noise.

Please communicate by inputting text into the webinar control panel’s “Questions” field.
HL7 Context-Aware Knowledge Retrieval System
• HL7 International (Health Level Seven) and its members provide standards for the integration of health information
• Eliminate the “wild west” of integrations
• One of these standards is for the “Context-Aware Knowledge Retrieval, Knowledge Request Standard”
  • Infobutton
• Clinical Decision Support Work Group
• First version was approved in September 2010
• Provides a specific framework and structure for systems to submit knowledge requests to resources
Infobutton

Provides clinicians and patients with relevant resources to meet your MU2 objectives
<table>
<thead>
<tr>
<th>§170.314 (a) (8)</th>
<th>Clinical Decision Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>§170.314 (a) (15)</td>
<td>Patient-Specific Education Resources</td>
</tr>
</tbody>
</table>
Why Infobutton?

• Clinicians need resources to find answers at the point of care
• Infobutton provides a way to integrate resources into the EHR or PHR system
• Provides a more efficient way to get to these resources, so that they may be used more frequently
BENEFITS

1) Context-specific topic to support decisions
2) Specialized by user – Patients, physicians, pharmacists, nurses
3) Access to authoritative information without leaving workflow
Enables interoperability
Utilizes standard terminologies – ICD-9, ICD-10, SNOMED, RxNORM, NDC, LOINC, CPT
HOW DOES IT WORK?
Retrieves data from EHR and CDS content

ICD-10 E10.9  
Diabetes Type 1

LOINC 2345-7  
Fasting Blood Sugar

LOINC 4548-4 HbA1C  
RxNorm 5856 Insulin

Patient Education Handouts
Secure email
Patient Portal
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Specifies the display name for this patient’s gender is male</td>
</tr>
<tr>
<td>mainSearchCriteria.v.cs</td>
<td>2.16.840.1.113883.6.3</td>
<td>Specifies the ICD-10 code system</td>
</tr>
<tr>
<td>mainSearchCriteria.v.c</td>
<td>J15.9</td>
<td>ICD-10 code for unspecified bacterial pneumonia</td>
</tr>
<tr>
<td>age.v.u</td>
<td>A</td>
<td>Specifies the age unit (a=years)</td>
</tr>
<tr>
<td>age.v.v</td>
<td>65</td>
<td>Specifies the age value</td>
</tr>
<tr>
<td>subTopic.v.dn</td>
<td>Treatment</td>
<td>Specifies the subtopic description</td>
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</table>
HOW DOES IT WORK?

URL Representation:

mainSearchCriteria.v.c=J15.9&mainSearchCriteria.v.cs=2.16.840.1.113883.6.3&mainSearchCriteria.v.csn=ICD10
patientPerson.administativeGenderCode.dn=Male&Age.v.v=65&age.v.u=a&subTopic.v.dn=treatment
Generated XML:

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<resourceRequest>
  <mainSearchCriteria>
    <value code="J15.9" codeSystem="2.16.840.1.113883.6.3" codeSystemName="ICD10">
      <displayName value=""/>
    </value>
  </mainSearchCriteria>
</resourceRequest>
```
BACTERIAL PNEUMONIA

Background › Pathophysiology › Diagnostics › - History › - Physical Exam › - Dx Testing › - Dx Imaging › Differential Dx › Treatment › - Antibiotics › Disposition › References

Treatment
ABCs
Support O2 & consider Venous access prn
Bronchodilator medications (if wheezing)
Sepsis evaluation if <8 wks old & fever on toxic child
Consider use of antibiotics if bacterial pathogen likely
Empiric antibiotics based on
Age
Season
Clinical factors
Labs
Epidemiology

Antibiotic Recommendations
Outpatient ABx dosages
Inpatient antibiotic therapy
Inpatient antibiotic therapy
Infobutton Study:

• Needs dependent on context and clinician type
• All clinicians: institution-specific protocols
• MDs: unfamiliar domains
• RNs: physician order rationales
• NPs: Similar to MDs and RNs
• Suggestion: Infobutton should tailor anticipated questions by clinician type

How Does It Work?

Specialized Resources

- Pediatric Dosing Calculator
- Nursing Considerations, Patient Teaching
- AHFS
- Spanish education handout
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>informationRecipient</code></td>
<td>PAT</td>
<td>Specifies the intended recipient is a patient</td>
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<tr>
<td><code>performer.languageCode.c</code></td>
<td><code>en</code></td>
<td>Specifies the language of the user (en=English)</td>
</tr>
<tr>
<td><code>informationRecipient.languageCode.c</code></td>
<td><code>es</code></td>
<td>Specifies the language of the patient is Spanish (es=Spanish)</td>
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<tr>
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<td>Display name of the performer is RN</td>
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<td>Specifies the NDC code set</td>
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<tr>
<td><code>mainSearchCriteria.v.c</code></td>
<td>49502-693-03</td>
<td>NDC code for Albuterol sulfate inhalation solution 1.25 mg</td>
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</table>
HOW DOES IT WORK?

URL Representation:

informationRecipient=PAT&
Performer.languageCode.c=en&
informationRecipient.languageCode.c=es&
Performer.healthCareProvider.c.c=160W00000X&performer.health
careprovider.c.dn=Registered Nurse&
mainSearchCriteria.v.c=49502-693-03&mainSearchCriteria.v.cs=2.16.840.1.113883.6.9&mainSearchCriteria.v.ot=Albuterol+Sulfate+inhalation_solution+1.25mg
HTTP POST example:

```html
```
<performer>
  <healthCareProvider>
    <code code="163W000000X" codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC Health Care Provider Taxonomy" displayName="Registered Nurse"/>
  </healthCareProvider>
  <healthCarePerson>
    <languageCommunication>
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    </languageCommunication>
  </healthCarePerson>
</performer>

<!-- This indicates that the recipient of the content is a patient who speaks Spanish. Therefore, knowledge resources SHOULD interpret the following as a request for patient education content -->

<informationRecipient>
  <patient>
    <patientPerson>
      <languageCommunication>
        <languageCode code="es" codeSystem="2.16.840.1.113883.6.121" codeSystemName="Tags for the Identification of Languages" displayName="Spanish"/>
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    </patientPerson>
  </patient>
</informationRecipient>

<subject2>
  <taskContext>
    <code code="MEDLISTREV" codeSystem="2.16.840.1.113883.5.4" codeSystemName="ActCode"/>
NOMBRE GENÉRICO: Albuterol

¿PARA CUÁLES condiciones o enfermedades se prescribe este medicamento?
Albuterol se usa para prevenir y tratar síntomas como resoplo (silbido al respirar), respiración entrecortada y contractura torácica, provocados por enfermedades pulmonares como el asma y la enfermedad pulmonar obstructiva crónica (COPD por su sigla en inglés; un grupo de enfermedades que afectan al pulmón y a las vías aéreas). Pertenece a una clase de medicamentos llamados broncodilatadores. Funciona al relajar y abrir los bronquios, permitiendo el paso normal de aire a los pulmones, facilitando la respiración.

¿CÓMO se debe usar este medicamento?
Albuterol viene envasado en forma de tabletas, como jarabe, y como tabletas de liberación lenta (acción prolongada) para tomar por vía oral. Por lo general las tabletas y el jarabe se toman 3 ó 4 veces al día. Las tabletas de liberación lenta por lo general se toman 1 vez cada 12 horas. Tome este medicamento alrededor de las mismas horas todos los días. Siga cuidadosamente las instrucciones en la etiqueta del medicamento y pregúntele a su doctor o farmacéutico cualquier cosa que no entienda. Use el medicamento exactamente como se indica. No use más ni menos que la dosis indicada ni tampoco más seguido que lo prescrito por su doctor. Tome las tabletas de liberación lenta enteras, con un vaso de agua o de otro líquido. No las parte, mastique ni aplaste. Su doctor podría comenzar con una dosis baja del medicamento y aumentarla de manera gradual. Albuterol puede ayudar a controlar los síntomas pero no cura su condición. Continúe usando este medicamento aunque se sienta bien. No deje de tomar albuterol sin antes conversar con su doctor. Llame a su doctor si sus síntomas empeoran o si siente que el albuterol ya no los controla.
Albuterol (Systemic, Oral Inhalation)

Class: 12:12.08.12 Selective beta-2-Adrenergic Agonists
AccuNeb®, Combivent®, DuoNeb®, ProAir® HFA, Proventil®, Proventil® HFA, Ventolin® HFA, VoSpire® ER,

Introduction
Bronchodilator; relatively selective, short-acting β₂-adrenergic agonist.(1)

Uses

Bronchospasm in Asthma
Symptomatic management or prevention of bronchospasm in patients with reversible, obstructive airway disease (e.g., asthma).(132)(139)(154)(181)(241)(249)(255)(282)

Exercise-induced Bronchospasm
Prevention of exercise-induced bronchospasm.(132)(181)(249)

Chronic Obstructive Pulmonary Disease
Albuterol sulfate in fixed combination with ipratropium bromide: Symptomatic management of reversible bronchospasm associated with COPD in patients who continue to have evidence of bronchospasm despite regular use of a long-acting β₂-adrenergic bronchodilator (e.g., salmeterol). (181)(251)(252)(259)

Regular use of a selective, short-acting inhaled β₂-adrenergic agonist (e.g., albuterol) in the management of COPD, in contrast to that in asthma, does not appear to be detrimental.(206)(247)(250)(251)(266)(267)(268)(269)
ALBUTEROL

Adult Dosing

Acute Bronchospasm

- 0.5 mL of 0.5% solution (2.5 mg) nebulized q6hr
- Inhaler: 2 puffs q4-6hr
- Tabs 2-4 mg PO TID/QID

Severe bronchospasm

- 0.5 mL of 0.5% soln (2.5 mg) nebulized q20min or continuous x1 hr

Exercise-induced Bronchospasm: 180 mcg (2 puffs) inhaled 15-30 min before exercise; up to 12 puffs/24hr

Administration

- Inhaler should be shaken well & test-sprayed into the air before initial use or if it has not been used for a prolonged time
- Place inhaler well into the mouth, lips firmly closed around it
- Extended release tablets should not be chewed, crushed or mixed with food

See also combo with ipratropium ([Combivent/DuoNeb](#))

Pediatric Dosing

Inhaler

- >4 yo: as adult

Nebulizer

- 2-12 yo, >15 kg: 0.63-2.5 mg TID/QID
- Adjust flow rate of albuterol delivery over period of 5-15 min

Tabs
The Right Information

• Use observation studies and clinical context information to guide use of Infobuttons
  • Usage logs showing use of context-specific information resources
  • What is hypothetically useful vs. what is empirically useful?

OMEPRAZOLE

FDA notifies use of Prilosec & OTC Omeprazole (Omeprazole - a Proton pump inhibitor) is associated with an increased risk of Clostrium difficile-associated diarrhea (CDAD)

Adult Dosing
- Prilosec
  - Duodenal Ulcer
    - 20 mg PO qD x 2-4 wk
  - Tx of H. pylori infection
    - 20 mg PO BID x10 d WITH
      - amoxicillin 1000 mg PO BID AND
      - clarithromycin 500 mg PO BID x 10 d
  - Gastric Ulcer
    - 40 mg PO qD x4-8 wk
  - GERD
    - 20 mg PO qD x4 wk
  - Erosive Esophagitis
    - Tx: 20 mg PO qD x 4-8 wk
  - 20 mg PO qD
  - Hypersecretory condition (eg, Zollinger Ellison syndrome)
    - 60 mg PO qD (initial) up to 360 mg/d div qhr PO
    - If >80 mg qD, divide dose
  - Safety & efficacy of omeprazole for maint Tx >1 yr not established

- Dosage adjustment is suggested in pts. w/ hepatic dysfunction
- Administration
  - Enteric-coated tablets (acid-labile) should be swallowed whole, do not chew or crush
  - Generic/Prilosec (not Zegerid): For pts who have difficulty swallowing, capsule may be opened, contents emptied & mixed
Clinical Decision Support

- Problem List
- Medication List
- Medication Allergy List
- Demographics
- Lab Tests and Values/Results
- Vital signs
Provide patients with information to manage and maintain their own health
- Problem List
- Medication List
- Lab Results
What to look for when choosing a content provider

• Standardized terminology - improves retrieval results of Infobutton content

• Both clinician and patient information

• Evidence-based medicine; unbiased drug data

• Strategic partnership
Example: T-System

ABG ANALYSIS

- ABG Analysis
  - Interpretation
    - To differentiate acute and chronic metabolic and respiratory disorders:
      - Acute (pH abnormal)
      - Compensated
        - pH normal but PCO2 and HCO3 rise or fall together
      - Partially compensated
        - pH abnormal and PCO2 and HCO3 rise or fall together
      - Mixed
        - Alkalotic pH, respiratory acidosis and metabolic alkalosis
        - Acidotic pH, respiratory alkalosis and metabolic acidosis
  - Normal ABG Values
  - Respiratory Acidosis
    - Acute
      - pH - Less than 7.35
      - PCO2 - More than 45 mmHg
    - Partially Compensated
      - pH - Less than 7.35
      - PCO2 - More than 45 mmHg
      - HCO3 - More than 26 mmol/L
    - Compensated
      - pH - Normal
      - PCO2 - More than 45 mmHg
      - HCO3 - Less than 26 mmol/L

PEPID

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BRADEN RISK ASSESSMENT SCORE

BRADEN PRESSURE ULCER RISK ASSESSMENT SCORE

See also Modified Braden Q for children < 5 yo.

- Bed and chairbound individuals, or those with impaired ability to reposition should be assessed upon admission for risk of developing pressure ulcers.
- Patients w/ established pressure ulcers should be reassessed periodically.

Score (interpretation):
- Lower score indicates higher risk.
- Recommended cutoff score is <= 18 points.
- At risk (15-16 points):
  - Consider protocol of frequent turning, facilitating maximal remobilization; protecting all bony prominences; providing pressure-reducing support surface.
  - Manage moisture, nutrition, and friction and shear.
  - If other major risk factors present (advanced age, fever, poor dietary intake of protein, DBP < 60 mmHg, haemodynamic instability), advance to next risk level.
- Moderate risk (13-14 points):
  - Same as above.
  - Also consider providing foam wedges for 30-degree lateral positioning.
- High risk (10-12 points):
  - Complete protocol for high-risk patients plus uses pressure-relieving surface if patient is inadvisable to perform turning or additional risk factors such as immobility and incontinence.

SKIN
- intact
- nml color
- nml turgor
- warm dry
- healing abscess
- healing burn
- healing cellulitis
- healing wound
- no infection
- no petechiae
- no rash
- no urticaria
- no abrasions
- no lacerations

RASH
- location: generalized
- face
- scalp
- trunk
- RUE
- LUE
- RLE
- LLE

- character: macular / papular / maculopapular
- urticarial / erythematous / petechial
- vesicular / pustular / bullous
- fine / confluent / patchy
- linear / serpentine / circular

abnormal digital exam

Danmark rectal

heme positive

color: _____
Example: T-System

CLINICAL IMPRESSION
- Fever
- Acute syndromes
  - Migraine headache
  - Tension-type headache
  - Hypertensive headache
  - Cluster headache
  - Trigeminal neuralgia
  - Temporal arteritis
  - Cervical strain
- Upper respiratory infection
- Allergic rhinitis
- Hayfever
- Sinusitis
- Otitis media
- Otitis externa
- TMJ Syndrome
- Abnormal test
- Diabetes

AMOXICILLIN

AMOXICILLIN

Adult Dosing
- 250-500 mg PO TID OR 500-875 mg PO BID
- Moxalag (strep throat), 775 mg PO qD
- H. Pylori
  - 1 g PO BID (with PPI & clarithromycin) x10-14d
  - 1 g PO TID (with lansoprazole, no clarithromycin) x14d
- Gonorrhea
- Uncomplicated anogenital or urethral: 3 g PO x1
- Antivirals
  - Post-exposure prophylaxis: 500 mg PO TID x wk (with concomitant vaccine) or x60 d (no vaccine)
- Endocarditis, Prophylaxis
  - 2 g PO 1 hr before procedure
- Recent AHA Guidelines recommend only for high risk pts
- Renal Impairment
  - CrCl 10-30 mL/min: 250 or 500 mg q12hr
  - CrCl <10 mL/min: 250 or 500 mg qD
- Administration
  - Take without regard to meals
  - See also combo with clavulanate (Augmentin)

Pediatric Dosing
- >40 kg: 500 mg PO q12hr
- 22-33 kg: 20 mg/kg q12hr PO
- <22 kg: 10 mg/kg q12hr PO
- <11 kg: 30 mg/kg q12hr

Antibiotics

- Augmentin
- Biaxin
- Cefaclor
- Cefin
- Levamisole
- Penicillin V
- Septal DS
- Tamiflu
- Zithromax

SCHEDULES

- Activity/work-school
  - No restrictions
  - No strenuous activity
  - No contact sports
  - No sex
  -.an RT work
  - off work
  - an RT school
  - off school

Lifestyle

- No smoking
- No ETOH
- Lose weight

Options

- New
- Manage
- WT:
**CLINICAL IMRESSION**

fever underscored acute

**syndromes**
migraine headache underscored tension-type headache underscored hypertensive headache underscored cluster headache underscored trigeminal neuralgia underscored temporal arthritis underscored cervical strain underscored

**ent**

upper respiratory infection underscored allergic rhinitis underscored hayfever underscored sinusitis underscored otitis media underscored otitis externa underscored TMJ Syndrome underscored

abnormal test underscored diabetes underscored

**THE T SYSTEM**

Amoxicillin

Std Dose: 12.5 mg/kg PO q12hr
Selected Dose: 12.5 mg/kg

Confirm Concentration:

- 125 mg/5mL
- 200 mg/5mL
- 250 mg/5mL
- 400 mg/5mL

Unit Dose: 85 mg PO q12hr
Amount to give: 1.7 mL

**ID: **

- Antibiotics
  - Amoxicillin underscored
  - Augmentin underscored
  - Biaxin underscored
  - Cefadroxil underscored
  - Cefin underscored
  - Levaquin underscored
  - Penicillin V underscored
  - Septra DS underscored
  - Tamiflu underscored
  - Zithromax underscored

**SCTIONS**

- **Pepid**
  - **activity / work-school**
  - no restrictions underscored
  - no strenuous activity underscored
  - rest underscored
  - RT work underscored off work underscored
  - RT school underscored off school underscored

**lifestyle**

- no smoking underscored
- no ETOH underscored
- no drug weight underscored
Hypertensive Emergency

Pathophysiology

1. Mechanism
   • Systolic blood pressure (SBP) ≥ 180 mmHg and/or diastolic blood pressure (DBP) ≥ 120 mmHg
   • Usually asymptomatic, but some may experience headaches or anxiety
   • Hypertensive urgency indicates that BP is high enough to cause serious risk of sudden, life-threatening events but not currently occurring
   • Could quickly develop them if blood pressure not quickly brought under control

2. Etiology/Risk Factors
   • 90% risk of developing HTN in (even if normotensive at 55 yo)
     • Usually asymptomatic, but some may experience headaches or anxiety
   • Hypertensive urgency indicates that BP is high enough to cause serious risk of sudden, life-threatening events but not currently occurring
   • Could quickly develop them if blood pressure not quickly brought under control
   • Two types based on cause
Example: MEDHOST

Order Details
Melissa Johnson: In DIS02
70 yrs old, Hispanic Female
CCI: Fall Injury
Allg: Positive liver allergy,
PMHx: Hypertension, Diabetes - ICDM,
BP: 120/80, PR: 120, RR: 99.2, O2: 98%, WT: 52.16 kg

Ordered By: IG11
Ordered For: OK21

Dopamine drip 5 mcg/kg/min - (DOPamine 400 mg, D5W 250 ml) IV at calculated rate continuous; Titrate to keep s...

Created - 10/31/2013 13:04

Order Status:
- Ordered
- Prepared
- Administered
- Canceled
- Not Given

Order Information:
- Ordered By: Godwin, Lee, RN
- Ordered For: Carter, John, MD
- Order Creation: 10/31 13:04
- Ordering Method: Verbal - Read back

Intended Order: Dopamine drip 5 mcg/kg/min - (DOPamine 400 mg, D5W 250 ml) IV at calculated rate continuous; Titrate to keep systolic blood pressure greater than 90mmHg

PEPID Medication Details

- Drug amt: 400 mg
- per: 250 ml
- weight: 52.16 kg
- Dose: mcg/kg/min

IV, Dopamine Two
**Order Details**

<table>
<thead>
<tr>
<th>AL Giberson: in DIS14</th>
<th>Allg: (Nothing Entered)</th>
<th>Attend: Jones</th>
</tr>
</thead>
<tbody>
<tr>
<td>81 yrs old, Caucasian Male</td>
<td>PMHx: (Nothing Entered)</td>
<td>PHCP: PMD:</td>
</tr>
<tr>
<td>CC: General Weakness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EPINEPHrine 1:10,000 1 mg IVP once**

- **Ordered By:** lg11
- **Ordered For:** bj5

**Created - 10/31/2013 14:09**

**Order Information:**

- **Ordered By:** Godwin, Lee, RN
- **Order Creation:** 10/31 14:09

- **Ordering Method:** Verbal - Read back

**Intended Order:**

- **EPINEPHrine 1:10,000 1 mg IVP once**

**Dose** | **Volume** | **Route** | **Frequency** | **Repeat** | **Site** | **Rate** | **Infused Over** | **Delivery**
---|---|---|---|---|---|---|---|---
1 mg | | IVP | once | | | | | |

**PEPID Medication Details**

(Inotropes & Pressors) or (Asthma & COPD)

**EPINEPHRINE**

**Adult Dosing**

- Cardiac arrest: 0.1-0.3 mg 3-5min PRN OR
- Adult: 0.1-0.3 mg IVP
- ETT: 0.1-0.3 mg IVP
- Intracardiac: 0.1-1 mg
WHAT IS CARPAL TUNNEL SYNDROME?
Carpal tunnel syndrome is a painful condition that affects the hands and wrists.

WHAT ARE COMMON SIGNS AND SYMPTOMS?
- Nummness and tingling of the hand, fingers
- Pain in wrist, arm
- Weakness in hand

WHAT CAUSES CARPAL TUNNEL SYNDROME?
- Carpal tunnel is caused by a pinched nerve in the wrist
- Increased pressure on the median nerve in the carpal tunnel
- Disorder may be due to smaller size of carpal tunnel

WHAT INCREASES MY RISK?
- Repetitive tasks, such as assembly line work, computer work
- Medical conditions such as arthritis, diabetes, obesity, pregnancy
- Wrist injuries
- More frequent in women than man

WHAT ARE POSSIBLE COMPLICATIONS?
- If untreated, permanent damage may occur in the hand

WHAT CAN I EXPECT?
- Mild symptoms should go away with treatment and will have normal use of hands
- Severe symptoms may require surgery

HOW DO I REDUCE MY RISK?
- There are no specific preventive measures

DIAGNOSIS AND TREATMENT
WHAT GENERAL MEASURES SHOULD I TAKE?
- Your healthcare provider will examine your hand and ask about your symptoms
  - Activity
  - Exercise regularly to improve fitness
  - Diet
  - Eat a well-balanced diet
  - Maintain healthy weight
- To Learn More about your condition:
  - National Institute of Neurological Disorders and Stroke (NIH), NIH Neurological Institute
  - P.O. Box 8801, Bethesda, MD 20824; (800) 352-9424; website: www.ninds.nih.gov

WHAT ARE COMMON LABS AND TESTS?
CELECOXIB

Adult Dosing

**FDA Advisory Recommending Limited Use of COX-2 Inhibitors**
- Osteoarthritis: 200 mg PO QD OR 100 mg PO BID
- Rheumatoid arthritis: 100-200 mg PO BID
- Familial adenomatous polyposis: 400 mg PO BID
- Acute pain: initial 400 mg PO THEN 200 mg PO BID PRN

Pediatric Dosing

- JRA, >2 yr:
  - 10-25 kg: 50 mg PO BID
  - >25 kg: 100 mg PO BID

Contraindications and Cautions

- **Contraindications**
  - Absolute: ASA allergy, chronic hepatitis, CAGB
  - Relative: asthma (bronchial), bleeding diathesis, bronchospasm, duodenal/gastric/peptic ulcer, renal impairment

- **Cautions**
  - CHF, hypertension
  - Incr risk of adverse cardiovascular events & skin reactions; see FDA Advisory & ASA Guidance
  - Risk of GI bleed, ulceration & perforation

Indications & Uses

- Rheumatoid arthritis, dysmenorrhea, familial adenomatous polyposis, osteoarthritis, ankylosing spondylitis
- JRA
Beconase comes as an aerosol and a solution to inhale through the nose. It usually is inhaled two to four times a day at evenly spaced intervals. Follow the directions on your prescription label carefully, and ask your doctor or pharmacist to explain any part you do not understand. Use beconase exactly as directed. Do not use more or less of it or use it more often than prescribed by your doctor. Beconase controls symptoms of asthma and other lung diseases but does not cure them. Do not stop using beconase without talking to your doctor. Before you use beconase the first time, read the written instructions that come with it. Ask your doctor, pharmacist, or respiratory therapist to demonstrate the proper technique. Practice using the inhaler while in his or her presence. Before using beconase, gently blow your nose to clear your nasal passages. Avoid blowing your nose for 15 minutes after inhaling the prescribed dose.
Questions?

Contact us: (888) 321-7828
Website: www.pepid.com

Jenna Reynolds
Director, Business Development
PEPID
jreynolds@pepid.com