

Allergy Status – Identification And Documentation



Basic Medication Safety (BMS) Certification Course
King Saud bin Abdulaziz University for Health Sciences, Ministry
of National Guard – Health Affairs

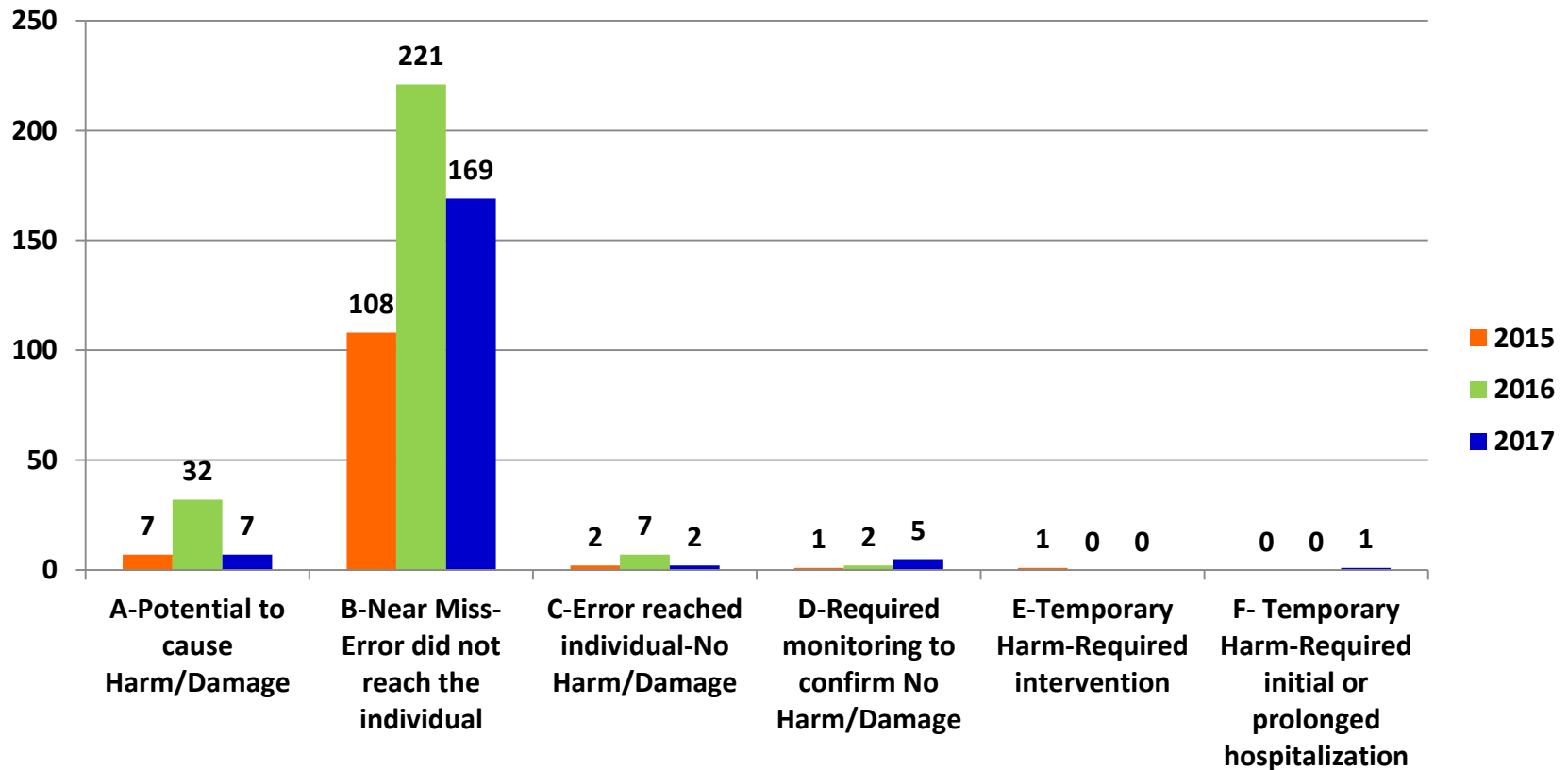
Learning Objectives

- Identify the true drug allergic reactions
- Define the different types and classifications of ADR
- Identify the clinical presentation of drug allergy
- Recognize the treatment of drug hypersensitivity reactions
- Differentiate anaphylaxis from other allergic reaction presentations and its treatment

Case # 1

- 64 year old woman
- Hx anaphylaxis with Cefuroxime
- Dx bowel obstruction, s/p laparotomy / mesh repair
- Post-op: Metro**NIDAZOLE** and Ciprofloxacin
- ASO – day before anticipated discharge
- Cefuroxime 750 mg IV every 8 hour prescribed via CPOE
- Allergy alert fired, overridden by physician with 'OK'
- Allergy alert fired, overridden by pharmacist with '*'
- Administered by a nurse without verifying the allergy
- ADT form over the bed transcribed "NKA"
- Anaphylactic shock / Coded / Transfer to ICU / **Expired**

Medication Errors / Near Misses: Patients with Known Allergy *(Harm Category)*



Definitions

- **Allergy**

is defined as a state of hypersensitivity induced by exposure to a particular antigen (allergen), resulting in harmful immunologic reactions on subsequent exposures

- **Anaphylaxis**

is defined as a severe systemic allergic reaction following exposure to a specific substance in a susceptible individual

- **Drug Allergy:**

is defined as having a low threshold to the normal pharmacological action of a drug, for example, a patient may have a mild stomach upset after taking antibiotics

Definitions

□ **Cross-reactivity**

is defined as sensitivity to a substance that predisposes an individual to a sensitivity of other related substances, e.g., cross-sensitivity with an allergic reaction may develop between antibiotics of similar chemical structures

□ **Drug Hypersensitivity:**

an immune-mediated response to a drug agent in a sensitized patient; includes both allergic and pseudo allergic drug reactions

Classifications of ADRs

Type A Reactions

- Predictable
- Common
- Relate to the pharmacologic actions of the drug
- May occur in any individual
- **Examples:**
 - **Toxicity** – hepatic failure with high dose acetaminophen
 - **Side effect** – sedation with antihistamines
 - **Secondary effect** – development of diarrhea with antibiotic treatment
 - **Drug interaction** – theophylline toxicity in the presence of erythromycin tx

Type B Reactions

- Unpredictable
- Uncommon
- Usually not related to the pharmacologic actions of the drug
- Occur only in susceptible individuals
- **Example:**
 - **Hypersensitivity (immunologic) reaction**
 - anaphylaxis with penicillin administration

Skin Manifestations



Timing of Anaphylaxis (Type I Reactions)

- IgE-mediated reactions occur rapidly after the last administered dose
- The time to onset is influenced by the route of administration:
 - ▣ IV: seconds to minutes
 - ▣ Orally: 3 - 30 minutes (empty stomach)
 - ▣ Orally: 10 - 60 minutes (with food)
- IgE-mediated anaphylactic reactions should NOT begin several days into a course of therapy

History.....!

- ☐ Are you allergic to any drugs / food?
- ☐ What happened when you took this medication / food?
- ☐ When was this reaction?
- ☐ Have you taken that medication / food since?
- ☐ Do you have any other allergies?

Common Medications Cause Drug Allergy

- Anticonvulsants
- Anti-infectious agents
- Neuromuscular blocking agents (NMBA)
- NSAID (phenylbutazone, diclofenac,..)
- Radiocontrast media

Case # 2

- 11 year old girl
- Hx allergy to Penicillin and Cefuroxime, which was documented in HIS-CPR
- Prescribed Ciprofloxacin IV and it was given
- 30 min after administration; patient became hypotensive; and have Anaphylactic Reaction
- **EPINEPHrine**, Dexamethasone and Diphenhydr**AMINE** was given; then patient shifted to PICU
- Reviewing the patient chart by Immunology; it was discovered that 10 months back patient had a query drug reaction after taking Ciprofloxacin
- **Not** documented in “Precaution Screen” in HIS-CPR.
- ADR report was **not** initiated

Therapy and Management (Non-Anaphylaxis)

- Discontinuation of the offending medication
- Call the prescriber
- Systemic Corticosteroids may speed recovery in severe cases of drug hypersensitivity
- Topical Corticosteroids and oral Antihistamines may improve dermatologic symptoms
- Additional therapy for drug hypersensitivity reactions is largely supportive and symptomatic
- Symptoms will resolve within two (2) weeks if the diagnosis of drug hypersensitivity is correct

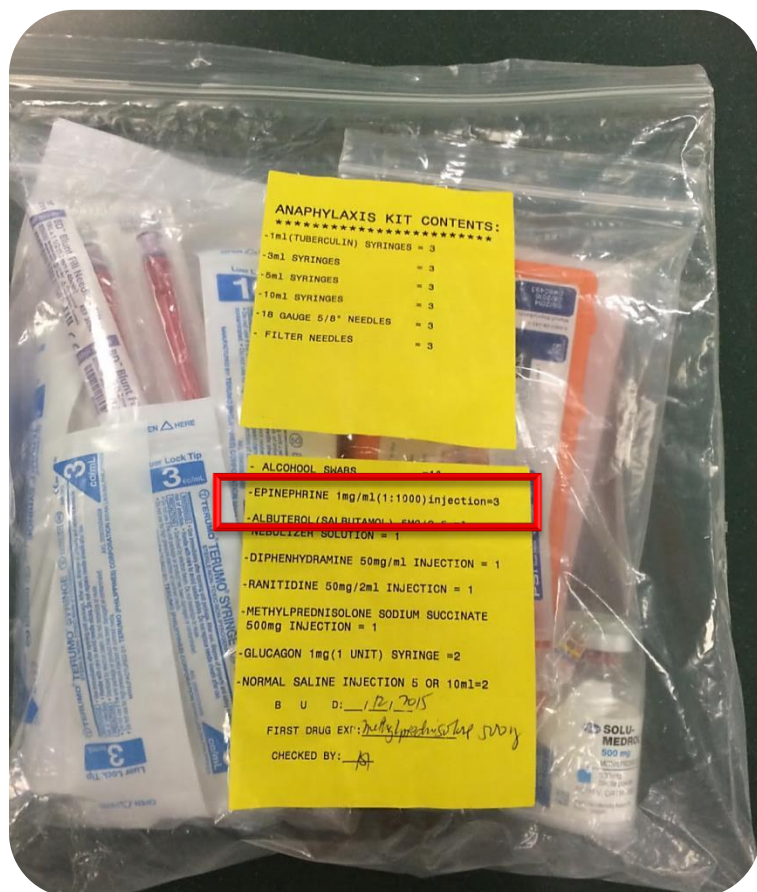
Acute Anaphylaxis Management

1. EPINEPHrine IM
2. EPINEPHrine IM
3. EPINEPHrine IM
4. EPINEPHrine IM
5. EPINEPHrine IM
6. EPINEPHrine IM
7. EPINEPHrine IM
8. EPINEPHrine IM



9. EPINEPHrine IM
10. EPINEPHrine IM
11. EPINEPHrine IM
12. EPINEPHrine IM
13. EPINEPHrine IM
14. EPINEPHrine IM
15. EPINEPHrine IM
16. EPINEPHrine IM

Standardized Anaphylaxis Kit for adult and Pediatric available in Floor Stock



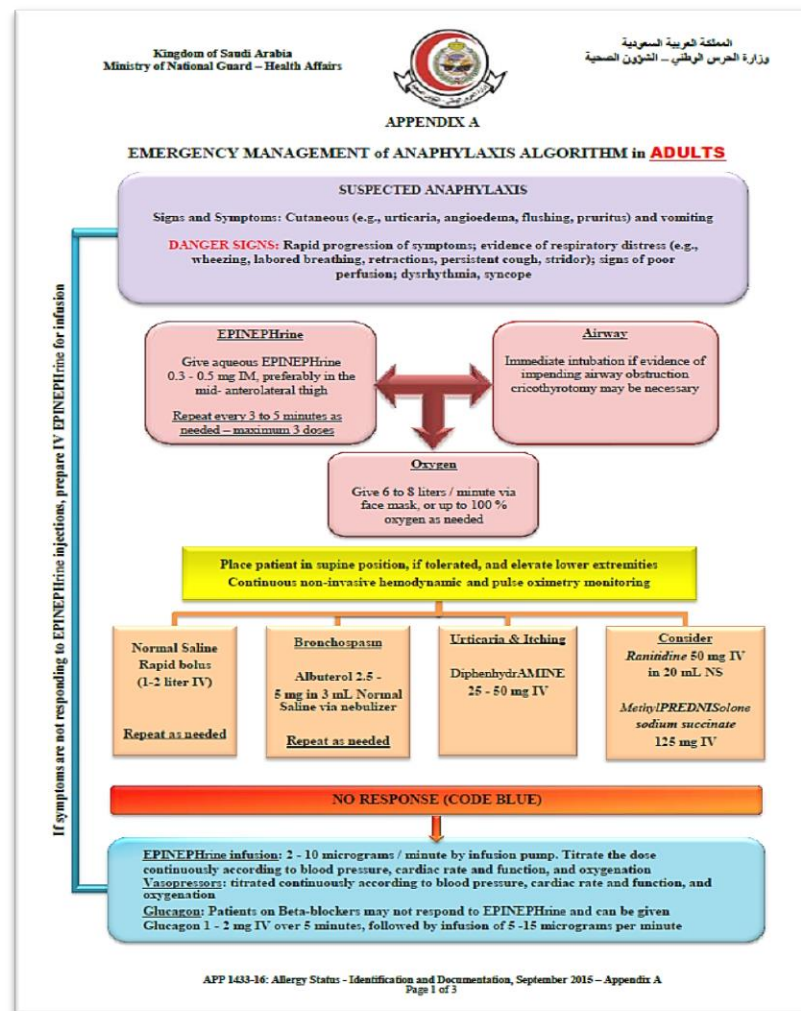
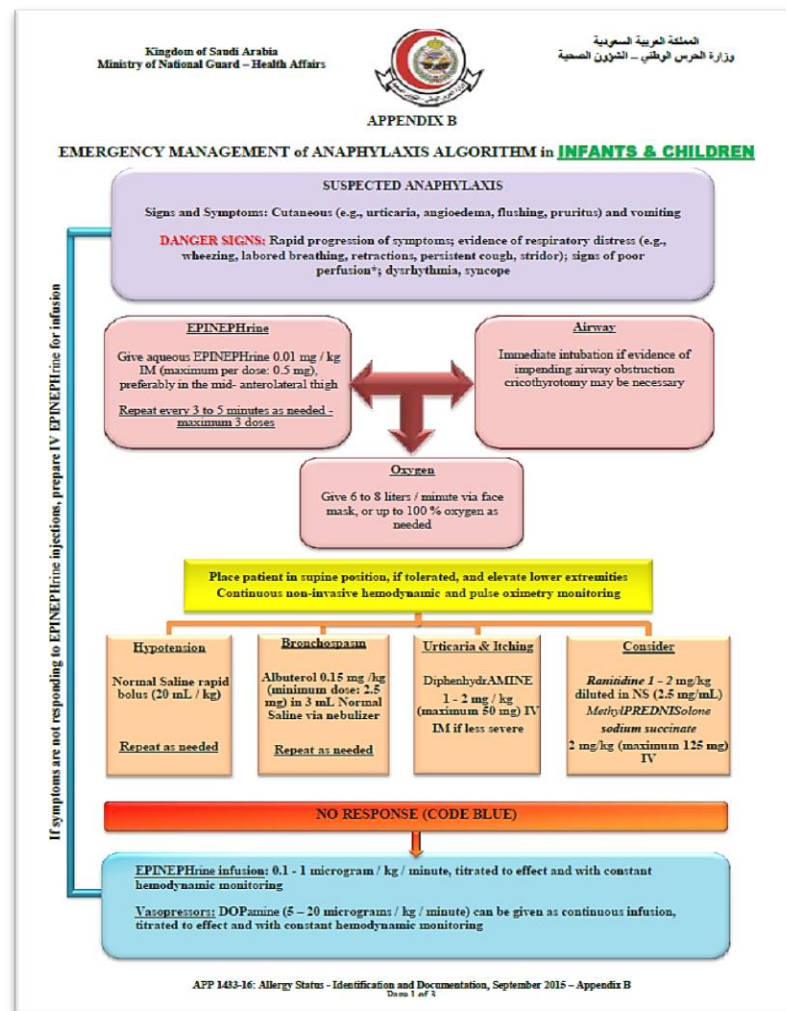
| QUANTITY | ITEM |
|----------|--|
| 3 | 1 mL (tuberculin) syringes |
| 3 | 3 mL syringes |
| 3 | 5 mL syringes |
| 3 | 10 mL syringes |
| 3 | 18 gauge 5/8" needles |
| 3 | Filter needles |
| 10 | Alcohol swabs |
| 3 | EPINEPHrine 1 mg / mL (1:1,000) injection |
| 1 | Albuterol (Salbutamol) 5 mg / 2.5 mL Nebulizer Solution |
| 1 | DiphenhydrAMINE 50 mg / mL injection |
| 1 | Ranitidine 50 mg / 2 mL injection (Must be diluted with NS to 2.5 mg/mL) |
| 1 | MethylPREDNISolone sodium succinate 500 mg injection (Reconstitute lyophilized powder with 8 mL of Sterile Water for injection) |
| 2 | Sterile Water for injection 5 or 10 mL |
| 2 | Normal Saline for injection 5 or 10 mL |
| 1 | Normal Saline IV bag 500 mL |
| * | Emergency Management of Anaphylaxis Algorithm in ADULTS (Appendix A) |
| * | Emergency Management of Anaphylaxis Algorithm in INFANTS & CHILDREN (Appendix B) |

* As Applicable

Note: This list may change based on additions and/or deletions made to the MNG-HA Drug Formulary by the Corporate Pharmacy and Therapeutics Committee.

APP 1433-16: Allergy Status- Identification and Documentation, September 2015 - Appendix C

APP 1433-16 Allergy Status – Identification and Documentation

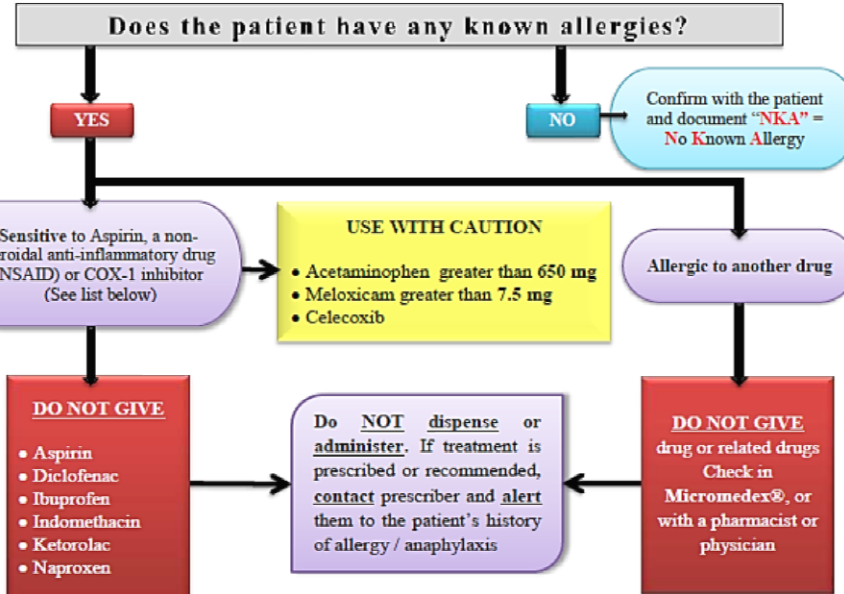




APPENDIX D

ASPIRIN SENSITIVITY ALGORITHM

Always check for any drug allergy before prescribing, dispensing and administering drugs



Aspirin sensitivity is due to COX-1 inhibition, and **NOT** an actual immune response. Most NSAIDs also inhibit COX-1 and are therefore likely to also induce a sensitivity reaction. Aspirin sensitivity involves symptoms that are respiratory in nature, such as rhinitis and worsening of asthma, or skin manifestations, such as urticaria and angioedema (swelling of the skin).

The chance for cross-reactivity between aspirin and NSAID in a patient with a true allergic reaction to either is less likely.

Remember.....!

- Pre-medication **WILL NOT** prevent anaphylaxis if given prior to the allergenic drug
- Pre-medication **ONLY** approved for previous immediate hypersensitivity reaction Radio Contrast Media (RCM) which developed within one (1) hour of administration



Source: <https://www.uptodate.com/contents/immediate-hypersensitivity-reactions-to-radiocontrast-media-prevention-of-recurrent-reactions>

Allergy Documentation

- Allergy status must be documented before any medication(s) is / are administered, **except** in emergencies
- Assessment and documentation of an allergy is a diagnosis and must be **determined** by a **physician**, and attention given to the diagnosis of Allergy prior to prescribing
- It is the Physician's responsibility to **verify** and **document** allergy in the HIS-CPR, as well as on the patient's clinical record / order sheet, which should lead to the patient's chart to be "**flagged**" with allergy statement

Allergy Status

No Known Allergy

The patient / carer and clinical records are clear that the patient has never experienced an allergic reaction or severe adverse reaction to any substance

Unable to Obtain

ONLY be used in exceptional circumstances where it has not been possible to confirm allergy status upon admission. Allergy status **must** be **confirmed** as soon as possible

Known Allergy

Name the substance; for medications the generic name(s) of medication(s) must be documented

Recommendations on how to Reduce the Risk of Medication Errors with Known Allergens

- Check allergy status immediately before prescribing, dispensing or administering drugs: Every drug, Every patient, Every time
- Understand allergies and cross-allergies
- Educate patient / carer of their allergy status. Patients need to have a clear understanding of which drugs(s) to avoid. The patient is the one constant factor irrespective of where health care is delivered
- Standardize allergy history taking & documentation
- Maximize the impact of computerized prescribing



MNGHA CARE Mobile App Wherever you are..



The Ministry of National Guard - Health Affairs (MNG-HA) has developed its patient portal (MNGHA Care) to enhance the healthcare experience for their patients.

It aims to allow the patient to access his/her electronic medical record, provide electronic services, increase health awareness, promote positive health outcomes as well as offer reliable health information.



*Request/ Cancel Appointments.



View Radiology Reports & Lab Results.



Request/Print Medical Reports.



Request Medication Refill.



Renew/ Open Medical File.



Vaccinations Reminder.



And More..

*These services will be launched in all regions successively



Service Level Agreement
(SLA)

MNGHA Care is available as an app for mobile devices



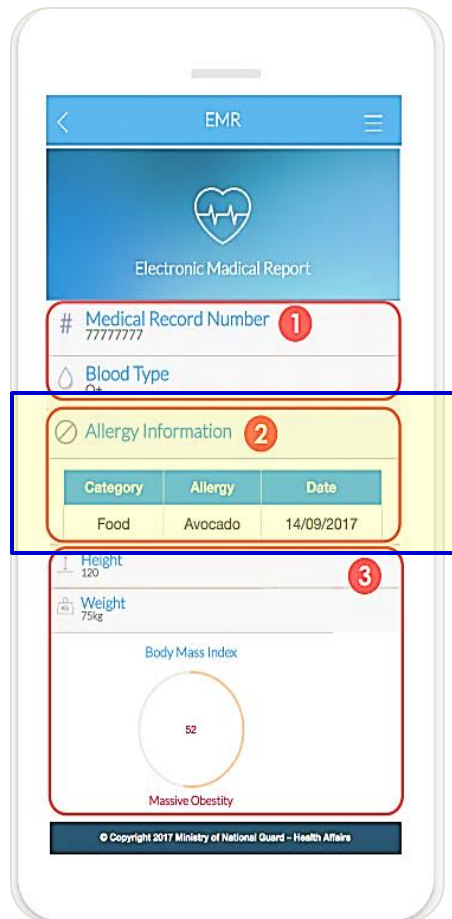
or search on mobile store by using application name
(MNGHA Care)

And you can access it through the browser:

<https://mngthicare.ngha.med.sa>



Educate patient / carer of their allergy status



Displays the basic health information in the Electronic Medical Record

- Shows the user's basic information such as patient number, and blood type.
- Displays all **Allergy Information** that has been documented in HIS which contain all related allergies details: Name , category and date.
- Shows the user's basic health information such as height and weight that has been documented in HIS and Body Mass Index .

APP 1433-16: Allergy & Hypersensitivity Recording & Documentation

APP 1433-16.pdf

Organization : NGHA

Original Department : 7339 - SAUDI MEDICATION SAFETY CENTER

Title : Allergy Status - Identification And Documentation

Statement of Purpose : To define the process in identification and documentation of patient allergy/intolerance status in order to prevent patient harm within the Ministry of National Guard ? Health Affairs (MNG-HA) healthcare and all affiliated facilities.

APP Number : 1433-16

Category : Operation, Administrative, Finance, & others

Replaces :

Remarks :

Original Date : 13-10-2012

Revised Date : 12-09-2015

Effective Date : 22-10-2015

Appendixes / Attachments : [Appendix A-Emergency Mgt of Anaphylaxis Algorithm in Adults.docx](#)
[Appendix B-Emergency Mgt of Anaphylaxis Algorithm in Infants & Children.docx](#)
[Appendix C-Anaphylaxis Kit.docx](#)
[Appendix D-Aspirin Sensitivity Algorithm.docx](#)
[Appendix E-Algorithm-Opioid Intolerance Decision.docx](#)
[Appendix F-Penicillin \(Beta-Lactam\) Allergy Cross-Reactivity Algorithm.docx](#)
[Appendix G-Sulfa Drugs Allergy Cross-Reactivity Algorithm.docx](#)

[Back](#)

Note: For the best view of APP Go to the View Menu in the Browser Toolbar and change the Text size to 'Medium'

Safe Patient Care Is Our Goal