**Guide for Design & Coding the Diagnoses Part of the Application**

There are 8 Diseases Categories Labelled A – M, each of these categories have diseases under them, while some other have sub-categories.

The major categories should come in drop down, selecting a category brings out it’s subsets (where further subsets exists, clicking the subsets drops down the next level subset).

When a disease has been selected, the next compulsory field should be a check box for Penicillin Allery “Yes” or “No”

When “Yes” is selected for Penicillin Allergy, the “**\***” medication(s) which means they are is contraindicated in penicillin allergy should be displayed in bright red colourwhile other medications displayed in black.

But when Penicillin Allergy is selected as a “No” all the medication(s) should be displayed as black for that disease.

These three should be displayed as footnote under the final medications suggested at all times

\* Contraindicated in penicillin allergy

\*\* Means the medication(s) Contraindicated in sulpha-drug allergy

\*\*\* Not on many hospitals’ formularies

**A. PROPHYLACTIC ANTIBIOTICS**

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| --- | --- |
| **DISEASE** | **MEDICATION** |
| ***Rheumatic Fever*** | Phenoxymethylpenicillin\*  **Dose 1.2g IM every 4 weeks.**  The oral dose is less effective.Prophylaxis against rheumatic fever is indicated for 5 years after the first episode or until the age of 21 years to prevent valvular damage.  Sulfadiazine\*\*  **Dose 1g PO daily**  Erythromycin or Azithromycin are also options. |
| ***Streptococcal Infection*** | Phenoxymethylpenicillin\*, Erythromycin, Azithromycin |
| ***Meningitis*** | Ciprofloxacin, Rifampicin\*\*\*, Ceftriazone |
| ***Influenza*** | Rifampicin\*\*\*, Ceftriazone |
| ***Diphtheria*** | Erythromycin, Azithromycin, Clarithromycin |
| ***Pertussis*** | Clarithromycin, Azithromycin , Erythromycin |
| ***Pneumococcal Infection*** | Phenoxymethylpenicillin\*, Erythromycin |
| ***Tuberculosis*** | Isoniazid, Rifampicin\*\*\*, Pyrazinamide, Ethambutol\*\*\* |
| ***Animal and human bites*** | Co-amoxiclav\*, Doxycycline, metronidazole |
| ***Neonatal Infection*** | Benzylpenicillin \*, Clindamycin |
| **Gastro-intestinal procedures** |  |
| i. Operations on stomach or oesophagus | Gentamicin, Cefuroxime, Co-amoxiclav\*, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| ii. Open biliary surgery | Cefuroxime, Metronidazole, Gentamicin, Co-amoxiclav\*, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| iii. Resections of colon and rectum for carcinoma, inflammatory bowel disease and appendicectomy | Cefuroxime, Metronidazole, Gentamicin, Co-amoxiclav\*, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| iv. Endoscopic retrograde cholangiopancreatography | Gentamicin, Ciprofloxacin, Amoxicillin\*, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| v. Percutaneous endoscopic gastrostomy or jejunostomy | Co-amoxiclav\*, Cefuroxime, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| **Orthopedic surgery** |  |
| i. Joint replacement including hip and knee | Cefuroxime, Flucloxacillin\*, Gentamicin, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| ii. Closed fractures | Cefuroxime, Flucloxacillin\*, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| iii. Open fractures | Co-amoxiclav\*, Cefuroxime, Metronidazole, Clindamycin, Teicoplanin\*\*\*, Vancomycin\*\*\*, Gentamicin |
| iv. High lower-limb amputation | Co-amoxiclav\*, Cefuroxime, Metronidazole, Teicoplanin\*\*\*, Vancomycin\*\*\*, |
| **Urological Procedures** |  |
| i. Trans rectal prostate biopsy | Ciprofloxacin, Metronidazole, Gentamicin |
| ii. Trans uretheral resection of prostate | Ciprofloxacin, Gentamicin, Cefuroxime Gentamicin |

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| **Obstetric and Gynecological Surgery** |  |
| i. Caesarean section | Cefuroxime, Clindamycin, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| ii. Hysterectomy | Cefuroxime, Metronidazole, Gentamicin, Co-amoxiclav\*, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| iii. Termination of pregnancy | Metronidazole, Doxycycline |
| **Cardiology procedures** |  |
| i. Cardiac pacemaker insertion | Cefuroxime, Flucloxacillin\*, Gentamicin, Teicoplanin\*\*\*, Vancomycin\*\*\* |
| **Vascular surgery** |  |
| i. Reconstructive arterial surgery of abdomen, pelvic or legs | Cefuroxime, Flucloxacillin\*, Gentamicin, Metronidazole, Teicoplanin\*\*\*, Vancomycin\*\*\* |

**B. BACTEREMIA**

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| **Septicemia** (Community-acquired) | Penicillins with good anti-pseudomonal cover and beta-lactamase resistance are useful as a first choice. Examples include:   1. Piperacillin/Tazobactam.   **Dose 4.5g 8hourly IV**  or   1. Ticarcillin/Clavulanic acid   **Dose 3.2g 6-8hourly IV**  Cefuroxime is a broad-spectrum cephalosporin which is readily available and relatively more affordable.  **Dose 750mg 6-8hourly IV**  Metronidazole may be added for anaerobic cover  Teicoplanin\*\*\*or Vancomycin\*\*\* where MRSA suspected.  Consider Meropenem where other resistant bacteria are an issue |
| **Septicemia** (hospital-acquired) | Penicillins with good anti-pseudomonal cover and beta-lactamase resistance are useful as a first choice.   1. Piperacillin/Tazobactam.   **Dose 4.5g 8hourly IV**  or   1. Ticarcillin/Clavulanic acid   **Dose 3.2g 6-8hourly IV**  Cefuroxime is a broad-spectrum cephalosporin which is readily available and relatively more affordable.  **Dose 750mg 6-8hourly IV**  Metronidazole may be added for anaerobic cover  Teicoplanin\*\*\*or Vancomycin\*\*\* where MRSA suspected. |
| **Septicemia** (related to vascular catheter) | Vancomycin/Teicoplanin\*\*\*  If immunocompromised consider gram -ve cover with antipseudomonal beta-lactam as in previous sections  Consider removing vascular catheter where staph aureus or fungi suspected |
| **Meningococcal septicaemia** | Immediate benzyl penicillin/ cefotaxime or ceftriaxone  Chloramphenicol if allergic to the above |

**C. CARDIOVASCULAR SYSTEM INFECTIONS**

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| **Endocarditis** (blind therapy) | **Native valve**: Ampicillin  **Dose 2g 6hourly IV**  Gentamicin may be added (monitor renal function)  **Dose 1mg/kg body weight 8hourly IV**  With severe sepsis from endocarditis, MRSA or if penicillin allergic\*\*\*  Vancomycin\*\*\*  **Dose** **15mg/kg body weight 12hourly IV**  Gentamicin  **Dose 1mg/kg body weight 12hourly IV**  **Prosthetic valve**:  Vancomycin\*\*\*  **Dose** **15mg/kg body weight 12hourly IV**  Rifampicin  **Dose 0.6-1.2g PO /IV daily in 2-4 divided doses**  Gentamicin  **Dose 1mg/kg body weight 12hourly IV** |
| **Endocarditis (staphylococcus)** | **Native** **valve**  Flucloxacillin  **Dose 2g 6hourly IV for 4 weeks, longer if other deep tissue abscesses**  In penicillin allergy\*\*\*/MRSA:  Vancomycin\*\*\*  **Dose** **15mg/kg body weight 12hourly IV duration as above**  Rifampicin  **Dose 0.6-1.2g PO /IV daily in 2-4 divided doses duration as above** |
| **Prosthetic** **valve**  Flucloxacillin  **Dose 2g 6hourly IV for 6 weeks**  plus  Rifampicin  **Dose 0.6-1.2g PO /IV daily in 2-4 divided doses duration as above**  plus  Gentamicin  **Dose 1mg/kg body weight 12hourly IV review need to continue after 2 weeks**  *If penicillin allergic treat as for Endocarditis blind therapy prosthetic valve* |
| **Endocarditis (streptocococcus)** | **Penicillin-sensitive streptococcus**  Benzylpenicillin  **Dose 1.2-2.4g 4hourly IV for 4-6 weeks**  If penicillin-allergic\*\*\*  Vancomycin  **Dose** **15mg/kg body weight 12hourly IV for 4-6 weeks**  +  Gentamicin  **Dose 1mg/kg body weight 12hourly IV review after 2 weeks** |
| **Endocarditis (staphylococcus)** | **Partially penicillin-sensitive streptococcus**  Benzylpenicillin  **Dose 1.2-2.4g 4hourly IV** **for 4-6 weeks**  +  Gentamicin  **Dose 1mg/kg body weight 12hourly IV for 4-6 weeks**  If penicillin-allergic\*\*\*  Vancomycin\*\*\*  **Dose** **15mg/kg body weight 12hourly IV for 4-6 weeks**  +  Gentamicin  **Dose 1mg/kg body weight 12hourly IV review after 2 weeks** |
| **Septic thrombophlebitis** | Treat as for “Septicemia (related to vascular catheter)” in section B. |

**D. CENTRAL NERVOUS SYSTEM INFECTIONS**

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| **Meningitis initial empirical treatment**  **(treat for at least 10 days)** | Immediate treatment if possible before transfer to hospital:  Benzylpenicillin  **Dose 1.2 IV immediately**  or  Ceftriaxone  **Dose 2g IV immediately** |
| Age 3-50 years  Ceftriaxone  **Dose 2g IV 12hourly**  +  Vancomycin\*\*\*  **Dose** **15mg/kg body weight 12hourly** |
| Age > 50 years  Ceftriaxone  **Dose 2g IV 12hourly**  +  Ampicillin  **Dose 2g 6hourly IV**  + (if prolonged/multiple antibiotic use in the previous 3 months)  Vancomycin\*\*\*  **Dose** **15mg/kg body weight 12hourly** |
| **Meningitis (confirmed meningococcus)** | Benzylpenicillin  **Dose 1.2 IV 6hourly**  or  Ceftriaxone  **Dose 2g IV 12hourly**  If allergic to Penicillin: Chloramphenicol |
| **Meningitis** | Vancomycin\*\*\*  Cefepime\*\*\* |
| **Brain Abscess** | Ceftriaxone  **Dose 2g IV 12hourly**  +  Metronidazole  **Dose 400mg IV 8hourly**  +  Vancomycin\*\*\*  **Dose** **15mg/kg body weight 12hourly** |

**E. EAR INFECTIONS**

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| --- | --- |
| Otitis externa | Clarithromycin, Azithromycin, Erythromycin, Flucloxacillin\*, Neomycin, Ciprofloxacin, Gentamicin |
| Otitis media | Amoxicillin\*, Ampicillin\*, Clarithromycin, Azithromycin, Erythromycin |

**F. EYE INFECTIONS**

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| --- | --- |
| Conjunctivitis (Purulent) | Chloramphenicol |

**G. GASTRO-INTESTINAL SYSTEM INECTIONS**

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| --- | --- |
| Campylobacter enteritis | Clarithromycin, Azithromycin, Erythromycin, Ciprofloxacin |
| Salmonella (non-typhoid) | Ciprofloxacin, Cefotaxime |
| Shigellosis | Ciprofloxacin, Azithromycin, Amoxicillin\*, Trimthoprim |
| Thyphoid fever | Cefotaxime, Ceftriaxone, Azithromycin, Ciprofloxacin |
| Clostridium difficile | Ampicillin\*, Amoxicillin\*, Co-amoxiclav\*, Clindamycin, Metronidazole, Vancomycin\*\*\*, Fidaxomicin, 2nd & 3rd generation Cephalosporins. Quinolones |
| Biliary tract infection | Ciprofloxacin, Gentamicin, Cephalosporins |
| Peritonitis | Ceftazidime, Metronidazole, Gentamicin, Clindamycin, Piperacillin/Tazobactam, Vancomycin\*\*\*, Teicoplanin\*\*\*, Ciprofloxacin |

**H. GENITAL SYSTEM INFECTIONS**

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| --- | --- |
| Bacterial vaginosis | Metronidazole, Clindamycin |
| Uncomplicated chlamydia infection, non-gonococcal urethritis and non-specific genital infection | Azithromycin, Doxycycline, Erythromycin |
| Uncomplicated gonorrhea | Azithromycin, Ceftriaxone, Cefixime, Ciprofloxacin |
| Pelvic Inflammatory Disease | Doxycycline, Metronidazole, Ceftriaxone, Ofloxacin |
| Syphilis | Benzathine benzylprnicillin, Doxycycline, Erythromycin |

**I. MUSCULOSKELETAL SYSTEM INFECTIONS**

|  |  |
| --- | --- |
| Osteomyelitis | Flucloxacillin\*, Fuscidic acid, Rifampicin, Vancomycin\*\*\*, Teicoplanin\*\*\* |
| Septic arthritis | Flucloxacillin\*, Clindamycin, Cefotaxime, Ceftriaxone, Vancomycin\*\*\*, Teicoplanin\*\*\* |

**J. NOSE INFECTIONS**

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| --- | --- |
| Sinusitis (acute) | Phenoxymethylpenicillin\*, Co-amoxiclav\*, Doxycycline, Clarithromycin, Erythromycin |

**K. ORAL INFECTIONS**

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| --- | --- |
| Oral Infections | Phenoxymethylpenicillin\*,  Amoxicillin\*  Co-amoxiclav\*  Cephalexin,  Sefradine\*\*\*  Tetracycline, Doxycycline, Clarithromycin, Azithromycin, Erythromycin, Clindamycin, Metronidazole, Tinidazole |

**L. RESPIRATORY SYSTEM INFECTIONS**

|  |  |
| --- | --- |
| Epiglottitis | Cefotaxime, Ceftriaxone |
| Chronic bronchitis | Amoxicillin\*, Ampicillin\*. Teracyclin, Clarithromycin, Azithromycin, Erythromycin |
| Pneumonia | Amoxicillin\*, Ampicillin\*, Azithromycin, Clarithromycin, Erythromycin, Doxycycline, Cefotaxime, Cefuroxime, Co-amoxiclav\*, Vancomycin\*\*\*, Teicoplanin\*\*\*, Ciproloxacin. Rifampicn, Piperacillin/Tazobactam, Ceftazidime |

**M. SKIN INFECTIONS**

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| --- | --- |
| Impetigo: small areas of skin | Fuscidic acid, Mupirocin |
| Impetigo: widespread infection | Flucloxacillin\*, Phenoxymethylpenicillin\*, Azithromycin, Erythromycin, Clarithromycin |
| Erysipelas | Phenoxymethylpenicillin\*, Benzylpenicillin\*, Flucloxacillin\*, Clindamycin, Azithromycin, Clarithromycin, Erythromycin |
| Cellulitis | Phenoxymethylpenicillin\*, Benzylpenicillin\*, Flucloxacillin\*, Clindamycin, Azithromycin, Clarithromycin, Erythromycin, Clindamycin, Vancomycin\*\*\*, Teicoplanin\*\*\* |
| Animal and human bites | Co-amoxiclav\*, Doxycycline, Metronidazole |
| Mastitis during breast-feeding | Flucloxacillin\*, Erythromycin |