Algorithm for management of suspected bacterial meningitis in adults and children

- **Bacterial meningitis suspected**
  - **Does patient have any of the following absolute contraindications to lumbar puncture?**
    - anti-coagulant therapy
    - bleeding diathesis
    - evidence of localised infection in the lumbar region
  - **No**
  - **ADULTS**
    - history of CNS disease
    - focal neurological signs
    - papilloedema
    - new-onset seizure
    - abnormally low level of consciousness
    - immunocompromised
  - **CHILDREN**
    - focal neurological signs
    - papilloedema
    - rapidly deteriorating consciousness or obtundation (Glasgow Coma Scale score less than 8)
    - perforated ear drum
  - **None of the above criteria**
  - **Blood cultures and lumbar puncture within 30 minutes of initial assessment**
    - **Dexamethasone 10 mg** (child: 0.15 mg/kg up to 10 mg) IV PLUS empirical antibiotics IV within 30 minutes of initial assessment (see empirical therapy)
  - **Are CSF findings consistent with bacterial meningitis?**
    - **No**
      - Reassess
    - **Yes**
      - Perform lumbar puncture
  - **Are clinical signs of raised intracranial pressure present?**
    - **No**
      - Reassess
    - **Yes**
      - Perform lumbar puncture
  - **CT scan shows cerebral oedema or other intracranial pathology**
    - **Yes**
      - Lumbar puncture is contraindicated
    - **No**
      - **ADULTS** Perform CT scan
      - **CHILDREN** Reassess and treat accordingly
  - **CT scan appears normal**
    - **Are clinical signs of raised intracranial pressure present?**
      - **No**
        - Continue empirical therapy
      - **Yes**
        - Add vancomycin to empirical therapy

* CT scans are not routinely performed in children. Review daily, and perform lumbar puncture as soon as the contraindication(s) have resolved. If lumbar puncture is still contraindicated, reassess and treat accordingly.

† Clinical contraindications to lumbar puncture and signs of impending herniation include a rapidly deteriorating level of consciousness, brainstem signs and very recent seizures.