

Supplemental Digital Content 1. Summary of existing World Health Organization (WHO) guidance for empirical antibiotic therapy for meningitis in neonates and young infants

Date	Document Title	Age group	First-line antibiotics	If no improvement 48 hours	Comments
1999	Conclusions from the WHO Multicenter Study of Serious Infections in Young Infants <sup>21</sup>	< 90 days	Third generation cephalosporin	Not discussed	Ampicillin and gentamicin for initial therapy of neonatal sepsis and anti-Staphylococcal agent for skin sepsis
2000	Management of the Child with a Serious Infection or Severe Malnutrition <sup>22</sup>	1 week to 2 months	Ampicillin + gentamicin or Ampicillin + chloramphenicol (if >37 weeks gestation)	Change to ceftriaxone or Cefotaxime	Change antibiotics to organism sensitivities if known
2003	Managing Newborn problems <sup>23</sup>	< 1 week	Ampicillin + gentamicin	Replace ampicillin with cefotaxime	Repeat LP after 48 hours if no improvement. Change antibiotics to organism sensitivities if known.
2005	IMCI <sup>24</sup>	1 week to 2 months	Benzylpenicillin + gentamicin	Basic care guidelines*	Guidance covers all possible serious bacterial infections †
2005	Pocketbook of Hospital Care for Children <sup>25</sup>	< 2 months	Ampicillin/Ben Pen + gentamicin or Ampicillin + chloramphenicol or Ceftriaxone / Cefotaxime	Not discussed	Document notes that ceftriaxone may cause biliary sludging leading to jaundice
2008	IMCI Chart Booklet - Standard <sup>26</sup>	< 2 months	Ampicillin + gentamicin	Basic care guidelines*	Guidance covers "possible serious bacterial infections" †
2008	IMCI for high HIV setting - Chart Booklet <sup>27</sup>	< 2 months	Ampicillin + gentamicin	Basic care guidelines*	Guidance covers "very severe disease" †
2008	IMCI Adaptation Guide; Part 2c <sup>28</sup>	1 week to 2 months	Benzylpenicillin + gentamicin	Basic care guidelines*	Guidance covers "possible serious bacterial infections". † Cefotaxime or ceftriaxone if gentamicin unavailable or penicillin-resistant <i>S. pneumoniae</i>

\*Guidelines aimed at first-level care settings and recommend referral of all infants with possible serious bacterial infection.

† No separate guidelines for neonatal meningitis.

‡ If >37 weeks gestation

IMCI = Integrated Management of Childhood Illness