The Epidemiology of TB, TB/HIV and MDR-TB in Adolescents: what is the extent of the problem?

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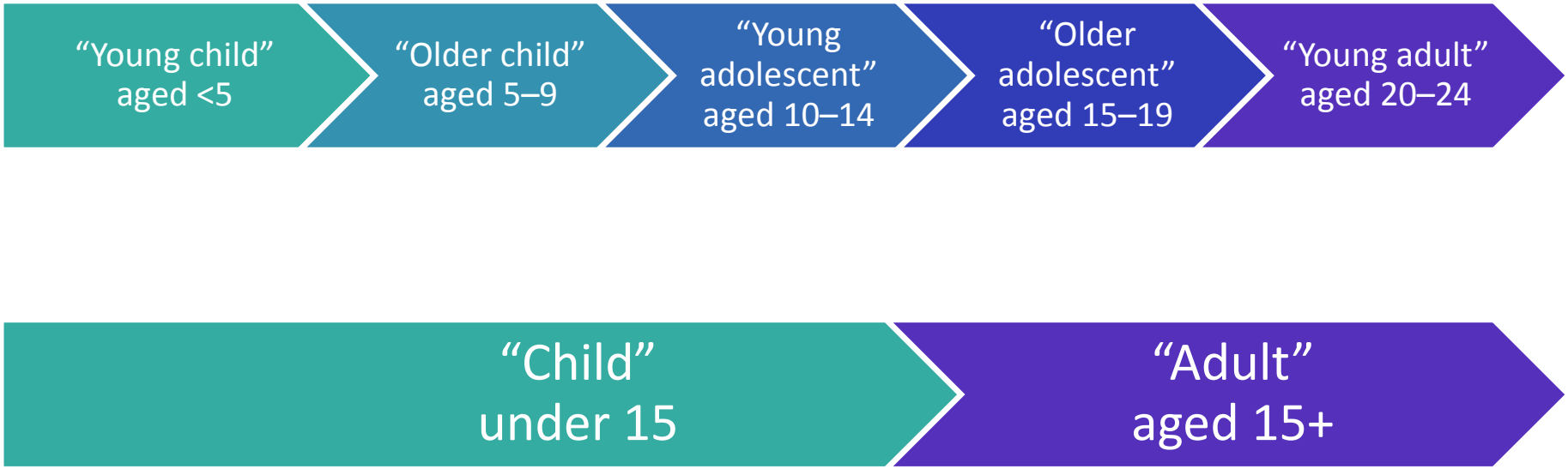
Background

- "Child" and "adolescent" have varied and often overlapping definitions:



Methods – Systematic Review

- Systematic review for setting-specific estimates of incidence and prevalence
  - Cohort studies
  - National prevalence surveys
  - ~3,496 hits > 481 full texts > 5 included studies (+8 on 15–24s)

Published incidence and prevalence

Author, year	**Setting**	**Age group**	**Estimate type**	**Point estimate per 100,000 *(WHO all ages estimate 2012)***	**95% confidence interval**
Waako, 2013	Rural Uganda	12–18	Incidence	253 *(193)*	125, 402
Mahomed, 2013	Rural South Africa	10–18	Incidence	450 *(827)*	290, 720
Mahomed, 2013	Rural South Africa	10–18	Prevalence	282 *(857)*	161, 457
Marais, 2005	Cape Town	10–14	Prevalence	210 *(857)*	5, 1,165

Methods – Incidence Estimate

- Multiple imputation of missing data in 15–24s, as for children under 15
- Disaggregation into 5 year age groups using data from countries with case based electronic surveillance systems

Results – Global Estimates

- We estimate that there were ~650,000 incident TB cases among adolescents in 2012 (CI: 545,000 – 825,000)
- Smear negative and extrapulmonary disease appear to be more common than smear positive disease, even in older adolescents.

Issues for future work

- Need for standardised reporting of age in published research – ideally 5 year age groups <25yrs
- Global epidemiology of extrapulmonary disease
- Programme data on TB/HIV, MDR-TB?

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