Congenital syphilis in England- is it on the rise?

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BACKGROUND

- Public Health England's (PHE) **Syphilis Action Plan** was launched in 2019 to address the recent increase in the number of **infectious syphilis diagnoses** including cases of congenital syphilis (CS).
- As part of the maternity strand of the Action Plan, the PHE Infectious Diseases in Pregnancy Screening (IDPS) programme's **Integrated Screening Outcomes Surveillance Service (ISOSS)** conduct **enhanced data collection of all cases of CS seen in England since 2015** (when previous surveillance ceased).
- ISOSS collects all data with **PHE Regulation 3 approval**
- Here we describe the **current picture of congenital syphilis in England** using population-level data

METHODS

- ISOSS conducts **national population-level surveillance of the screened-for infections in pregnancy** (HIV, syphilis and hepatitis B) and **infant outcomes.**
- All **maternity units in England** submit reports to ISOSS for **all syphilis screen positive** women seen for antenatal care, **infant follow up reports** are sought for all infants born to **women requiring treatment for syphilis in pregnancy**
- All cases of confirmed or suspected congenital syphilis are **reported directly to ISOSS**
- **Enhanced data collection of CS commenced in 2019** of all England-born children.
- ISOSS interview **all clinicians** involved in the care of the mother and baby during and after pregnancy.
- A **Clinical Expert Review Panel (CERP)** of relevant clinical specialists is convened to establish circumstances surrounding transmissions, any contributing factors and identify learning to **inform national guidelines and policy**.

RESULTS

- **24 cases of CS have been reported to ISOSS** and are currently part of the enhanced data collection. Year of birth ranged from 2015-2020 (Table 2) and cases were reported from London (5), North (10), South (7), Midlands and East of England (2). The majority of infants were born to white, UK-born women (Table 1).
- Early findings show that around **a third of mothers screened negative in pregnancy**, becoming infected with syphilis before delivery. Other factors contributing to the transmissions included **late booking and missed or delayed referral and/or treatment during pregnancy** or after the birth. Over half of mothers experiences **adverse social circumstances**.
- Child age at diagnosis ranged from 0-22 months and the majority of children had **clinical symptoms at diagnosis** ranging in severity from mouth blisters to multi-organ damage and notched teeth (Table 3). Most of the infants had been treated for syphilis at the time of the data collection, but a number remain under paediatric clinical follow up for other conditions (liver and lung problems), indicating **possible long-term health implications**.

Table 1: Maternal characteristics

	No of cases (%)
Median maternal age (IQR)	22 (IQR: 21, 25)
Maternal region of birth	
UK	21 (88%)
Eastern Europe	3 (12%)
Other	0
Maternal ethnicity	
White	23 (96%)
Other	1 (4%)
Timing of maternal diagnosis	
Antenatally	7 (29%)
Postnatally	17 (71%)
Complicating issues identified*	
Safeguarding/social services	10 (42%)
Insecure housing	7 (29%)
Intimate partner violence	6 (25%)
Foster care/adoption	6 (25%)
Mental health	6 (25%)
Drug/alcohol misuse	4 (17%)
Sex work	2 (8%)

***Many women experienced more than one of these issues so percentage total >100%**

Issues with maternal clinical management included:

- Penicillin allergy – treated with inappropriate alternative
- Missed clinical presentation/not referred to GUM when STI suspected

BASHH birthplan use:

1/7 diagnosed antenatally reported using BASHH birthplan [www.bashhguidelines.org/media/1139/syphilis-birth-plan-2016.pdf]

Table 2: Confirmed cases by year/region

	No of cases	Rate per 1,000 births†
Year of birth		
2015	1	0.001
2016	5	0.008
2017	5	0.008
2018	3	0.005
2019	9*	0.014
2020	1	-

*One set of twins

†Calculated using ONS data for births per calendar year (2020 ONS data not yet available)

Table 3: Infant outcomes

	No of cases (%)
Pregnancy outcome	
Livebirth	22 (92%)
Stillbirth	2 (8%)
Gestation at delivery	
≥37 weeks	12 (50%)
<37 weeks	12 (50%)
Child age at diagnosis (livebirths only)	
<1 month	12 (55%)
1-6 months	8 (36%)
6-12 months	0 (-%)
>12 months	2 (9%)
Clinical presentation at diagnosis	
Symptomatic	21 (95%)
No clinical indications	1 (5%)

CONCLUSIONS

- ISOSS provides the **only population-level data collection on CS in England** and ongoing monitoring and surveillance of CS is vital
- Findings to date, including a number of seroconversions, demonstrate the importance of **'negative now'** messaging and an **alertness amongst paediatrics** for symptoms that may indicate TORCH screening plus syphilis ('SCORTCH') **even in the context of a maternal negative screen in pregnancy**
- The **CERPs will continue to identify themes and make recommendations** to inform screening policies and clinical guidelines for the IDPS programme, PHE Sexually Transmitted Infections team and BASHH.
- ISOSS **maternity and paediatric syphilis surveillance** will provide **robust insights and contexts to ascertain whether the transmitting group are representative of the screen positive population,** as well as the **impact of COVID-19** to contribute to the wider strategy for the PHE's Syphilis Action Plan maternity strand project. Full report due to be published Summer 2021.

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