

Supplemental Digital Content 1
Figure 2

Treatment Groups

- Not Treated: Dispositioned by CDIs as “infected, not treated,” “located, but refused examination,” or “patient deceased.”
- Only one injection (validated): patient received only one injection of BPG. Patients could have received other regimens in continuation (e.g., doxycycline).
- Two injections correct interval (validated): patient received at least two injections of BPG in the correct time frame. Patients could have received other regimens (e.g., doxycycline) or additional BPG injections outside the appropriate time frame.
- Three injections correct interval (validated and non-validated): patient received all three injections of BPG in the appropriate time frame. They could have received additional regimens (e.g., doxycycline) or BPG injections.
- Two or more BPG injections incorrect interval: patient received at least two injections of BPG outside of the appropriate time frame. Patients could have received additional BPG injections outside the time frame or alternative regimens.
- Non-benzathine penicillin received: patient received no doses of BPG and only alternative regimens (e.g., doxycycline, aqueous crystalline penicillin G).

Supplemental Digital Content 2**Supplemental Table 1.** Non-benzathine penicillin treatments received (first dose) (2016-2021)

Treatment Type	Frequency (%)
Ceftriaxone 1 gm IM Or IV/day for 8-10 Days	1 (0.1)
Doxycycline 100 mg Orally 2x/day for 14 Days	108 (14.3)
Doxycycline 100 mg Orally 2x/day for 28 Days	544 (72.2)
Azithromycin 2 gm Orally for 1 Dose	1 (0.1)
Ceftriaxone 1 gm IM for 1 Dose	1 (0.1)
Ceftriaxone 1 gm IV/day for 14 Days	1 (0.1)
Other Treatment	28 (3.7)
Tetracycline 500 mg Orally 4x/day for 28 Days	1 (0.1)
Aq Crystalline Penicillin G 3-4 Mu IV Every 4 Hours 10-14 Days	64 (8.5)
Ceftriaxone 2 gm IM Or IV/day for 10-14 Days	2 (0.3)
Procaine Pen G 2.4Mu IM 1x/day+500Mg Probenecid 4x/day 10-14day	2 (0.3)

Supplemental Digital Content 3

Figure 3

Proposed Solutions to Improve the Syphilis Treatment Completion Rate

- Appropriate categorization of a patient's syphilis stage through thorough physician physical exams and public health disease investigators' partner tracking strategies.
- Increased funding to public health efforts, namely disease investigators, to be able to interview and track more positive syphilis cases.
- Evaluate nontreponemal titer decline among patients with intervals beyond the recommended intervals in a 3-dose series of BPG with consideration to expand treatment intervals to allow for greater flexibility for patients to schedule treatments.
- Expanded access to BPG through expansion of 340B pricing and bringing treatment to individuals in the community.