

CLINICAL SCENARIO

Timmy is a 12-month-old male in for a well child visit

- He lives in an apartment with his mom and 2 siblings
- Mom does not know the age of the building
- He visits with his dad who works in construction and lives in an “older” building with his mother
- Mom is going to school
- He attends childcare at a licensed daycare center
- He is insured by Medicaid

Does Timmy need a blood lead level?

YES – According to Ohio Law, Timmy needs a lead level

- He is insured by Medicaid
- His father’s occupation and housing are also possible sources of lead

Timmy’s lead level comes back at 7.5 µg/dL

The local health department contacts Timmy’s mom and provides her with information on preventing lead exposure

- Wet cleaning of surfaces
- Encourage iron-rich foods
- Discourage oral behaviors
- Get a follow-up lead level in about 3 months

At 15 months, Timmy comes back

- Mom has been cleaning the home 2x/week
- Dad has been changing his clothes before playing with Timmy
- Lead level, CBC, Ferritin, CRP [From Aparna: or reticulocyte Hgb] (per AAP guidelines)
 - Lead 12 µg/dL
 - CBC Hgb 10.8, otherwise normal
 - Ferritin 5.0
 - CRP normal

The Ohio Dept of Health performs a lead risk assessment at the home

- Timmy’s mom’s home was built in 1919
- There are lead hazards on the windows and trim as well as high lead dust levels on the floor
- There is water damage from a previous roof leak that is causing the plaster to bubble and crack
- There is bare soil in the back yard at the home where he plays
- Timmy drinks about 48 oz of cow’s milk/day
- Dad’s home was built in 1967, was completely renovated in the 1990s and dad only works in new construction

What other actions to take?

Iron supplementation

- Ferritin of 5 -> likely to increase lead absorption, low iron is also associated with developmental delays (see Baker et al, Pediatrics, 2010)

Reinforce temporary measures to address lead hazards

- Covering over areas of deteriorating paint with tape, etc
- Avoiding contaminated soil in the backyard
- Repeat lead level needed in about 1 month