The Performance of Immunoassays to Measure Antibodies to the *C* . . . Antigen Pgp3 in Different Epidemiological Settings for Trachoma

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A . . . Programs to eliminate trachoma as a public health problem use prevalence of the clinical sign trachomatous inflammation—

participants or access to identif ing information and ere determined to be not engaged in h man s bjects research.

Study sites. Pop lation-based pre alence impact and s r- eillance s r e s ere cond cted in f r districts (Alefa, Andabet, Dera, and Woreta To n) in the Amhara region of Ethiopia as pre io sl described.[15] Briefl , a m ltistage cl ster-random s r e as cond cted in all f r districts. All indi id als aged 1 ear and older in the selected h seholds ere in ited to participate in the s r e . Dried blood spots from onl 1 to 9- ear-olds (*N* 5 2195) ere tested b each assa described belo . Of these indi id als, 1,055 (48.1%)

as 0.899 (0.873–0.926). Samples ith discordant res lts bet een the MBA and other assa s fell closer to the MBA c t-off a e for ELISA and LFA-late (median MFI-bg of 729 and 516, respecti el) than LFA-gold (median MFI-bg of 7).

DISCUSSION

Pop lation-based serological s r e s can gi e an indication of e posre to a pathogen that can be modeled to estimate transmission in that pop lation. We ha e been in estigating hether and ho antibod testing can pro ide information abo t transmission of oc lar Ct in children to help trachoma programs monitor endemic or pre io sl endemic pop lations.

Each test platform has ad antages. MBA has good repro-

ELISA e,ıse here sho s good popvlation-le el agreement ith MBA. Both of these tests also pro ide semi-qvantitati e data that ma be,ıseflvl for some anal ses of antibod le els[18] that the LFA does not pro ide. Bvt the generall lo cost, lack of instrvment reqvirements, and ease of training andıse make the LFA an appealing option for post alidation svr eillance here fvnding ma be scarce or nonexistent.

The cvrrent stvd sho s optimi ation of a rapid lateral flo - based test (Pgp3-LFA) in response to popvlation-le el serological data that contrasted greatl ith other tests for this sample set. These data—particvlarl the LFA-gold panel in Figvre 2—highlight the svbjecti it of testsvsing chromogenic readovts rated b a person. For this stvd , the technician docvmented if the considered bands to be faint, er faint, or er er faint on a orksheet dvring the stvd . Althovgh these notations ere ovtside of protocol, the pro ed helpflvl invnderstanding the issves at hand, as these samples ere rovtinel negati e b other tests and most likel represented o ercalling of positi e tests. We posited that this occvrred becavse rvnning DBS on the LFA can lead to a pink smear. As a resvlt, the red test line that appears ith a colloidal gold de eloping reagent often needs to be differentiated from a light pink backgrovnd. The test line for strongl positi e specimens are eas to differentiate from the backgrovnd, bvt for eakl positi e specimens this can become challenging. For lo -pre alence popvlations, the tendenc to o ercall tests

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