

mortality because of imprecision and the small number of events [2]. The 95% confidence interval for the summary odds ratio for mortality (.46–1.21) included clinically relevant benefit as well as clinically relevant harm, not allowing for strong conclusions either way. However, as mentioned in our article, at least 5 ongoing eligible randomized clinical trials [2, [supplementary materials](#)] will help clarify the effect of corticosteroids on mortality in patients with CAP in the next few years. Our IPDMA was based on the currently available evidence, and we found no significant effect of corticosteroids on mortality, possibly owing to limited statistical power.

Stern et al [1] further state that they cannot follow our concerns with subgroup analyses of severe CAP in an aggregate data meta-analysis by Siemieniuk et al [3]. However, Siemieniuk et al themselves argue that “established criteria for evaluating subgroup analyses suggest that the apparent effect is probably spurious” because the effect is “based on differences between rather than within studies,” among other reasons [3]. Aggregate data meta-analyses typically classify the trials reported by Blum et al [4], Meijvis et al [5], and Snijders et al [6] as trials in patients with less severe pneumonia, ignoring the fact that these trials included up to 49% patients with severe CAP (pneumonia severity index class IV or V). For credible subgroup analyses, it is crucial to use standardized definitions across trials and to consider effects within rather than between studies, which is mostly possible only with IPDMA.

Finally, we agree with Stern et al that one should evaluate any intervention with a potential impact on mortality with great caution. However, this is why it is important to carefully consider the limitations of recent aggregate data meta-analyses and carefully consider benefits and harms, including our finding of an increased risk of CAP-related rehospitalization with corticosteroids, before jumping to recommendations.

A substantial proportion of the body of evidence on corticosteroids for CAP is still in the making.

Note

Potential conflicts of interest. All authors: No reported conflicts of interest. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

Matthias Briel,^{1,2} Simone M. C. Spoorenberg,³ Willem Jan W. Bos,^{3,4} and Mirjam Christ-Crain⁵

¹Department of Clinical Research, Basel Institute for Clinical Epidemiology and Biostatistics, University Hospital Basel, Switzerland; ²Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada; ³Department of Internal Medicine, St Antonius Hospital, Nieuwegein, and ⁴Department of Internal Medicine, Leiden University Medical Center, The Netherlands, and ⁵Endocrinology, Diabetology and Metabolism, Department of Internal Medicine and Department of Clinical Research, University Hospital Basel, Switzerland

References

1. Stern A, Leibovici L, Paul M. Corticosteroids reduce mortality in patients with severe community-acquired pneumonia. *Clin Infect Dis* 2018; 67:1467.
2. Briel M, Spoorenberg SMC, Snijders D, et al; Ovidius Study Group; Capisce Study Group; STEP Study Group. Corticosteroids in patients hospitalized with community-acquired pneumonia: systematic review and individual patient data metaanalysis. *Clin Infect Dis* 2018; 66:346–54.
3. Siemieniuk RA, Meade MO, Alonso-Coello P, et al. Corticosteroid therapy for patients hospitalized with community-acquired pneumonia: a systematic review and meta-analysis. *Ann Intern Med* 2015; 163:519–28.
4. Blum CA, Nigro N, Briel M, et al. Adjunct prednisone therapy for patients with community-acquired pneumonia: a multicentre, double-blind, randomised, placebo-controlled trial. *Lancet* 2015; 385:1511–8.
5. Meijvis SC, Hardeman H, Remmelts HH, et al. Dexamethasone and length of hospital stay in patients with community-acquired pneumonia: a randomised, double-blind, placebo-controlled trial. *Lancet* 2011; 377:2023–30.
6. Snijders D, Daniels JM, de Graaff CS, van der Werf TS, Boersma WG. Efficacy of corticosteroids in community-acquired pneumonia: a randomized double-blinded clinical trial. *Am J Respir Crit Care Med* 2010; 181:975–82.

Correspondence: M. Briel, Basel Institute for Clinical Epidemiology and Biostatistics Department of Clinical Research, University Hospital Basel, Spitalstrasse 8, 4031 Basel, Switzerland (matthias.briel@usb.ch).

Clinical Infectious Diseases® 2018;67(9):1467–8

© The Author(s) 2018. Published by Oxford University Press for the Infectious Diseases Society of America. All rights reserved. For permissions, e-mail: journals.permissions@oup.com. DOI: 10.1093/cid/ciy337

Strategies to Increase Human Immunodeficiency Virus Testing Among Men to Reach UNAIDS 90-90-90 Targets

TO THE EDITOR—We appreciated the review by Nachega et al [1] on the progress, challenges, and opportunities to achieve the viral suppression target of the Joint United Nations Program on human immunodeficiency virus (HIV)/AIDS (UNAIDS) in low- and middle-income countries (LMICs). Although viral suppression of HIV among those who are HIV infected is necessary to meet UNAIDS targets, those targets will not succeed without increasing HIV testing among men and linking HIV-infected men with healthcare [2].

Consider South Africa, the country that has the largest HIV epidemic in the world, as a case study. A recent study from KwaZulu-Natal, one of the provinces in South Africa most heavily affected by HIV, estimated that only 52% of HIV-infected men knew their status, whereas 65% of HIV-infected women knew their status, [3]. Those findings of worse HIV testing rates among men echo what has been observed in many other LMICs [2, 4]. Furthermore, men have worse antiretroviral therapy uptake and health outcomes after antiretroviral therapy initiation than women [5]. To reach UNAIDS 90-90-90 targets, testing among men needs to be improved.

Currently, South African National HIV testing programs, which link HIV-infected persons to care, commonly focus on key populations, including pregnant women [5]. South African guidelines aim to increase community-based testing in men because men are less likely than women to use clinical health services [5]. However, that testing strategy does not address the underlying barrier to HIV testing among men—stigma.

Stigma, due to concerns of prejudice and discrimination, remains a critical barrier to healthcare engagement and HIV testing among South African men [6]. A study from KwaZulu-Natal, South Africa found that cultural views of

masculinity and the fear of knowing their HIV status contribute to men's reluctance to undergo testing [7]. In addition, men reported feeling that primary health centers, which are generally staffed by female nurses, were not welcoming [7].

Among HIV testing interventions conducted in LMICs in sub-Saharan Africa, most interventions tried to reach men through women [8]. That approach must be changed to address HIV-related stigma among men. Evidence-based strategies were developed to increase HIV testing and decrease HIV-related stigma in other key populations (Table 1). Those strategies need to be adapted for South African men. Three main strategies need to be implemented: (1) "men-oriented" clinical health services, (2) widely offered and available HIV testing, and (3) home-based, HIV self-testing kits distributed in venues that men frequent. Targeted community-level education campaigns are also needed for men.

Although HIV testing and treatment has increased among South Africans, men are being left behind with the current HIV testing approach, similar to the situation in other LMICs. We hope that our proposed evidence-based strategies can be adapted for men and reduce HIV-related stigma. Better engagement and increased HIV testing among men is needed to reach the UNAIDS 90-90-90 targets and end the HIV epidemic.

Notes

Acknowledgments. J. D. K. was the US Centers for Disease Control and Prevention Branch Chief for HIV and TB, South Africa, from 2009 to 2011

Disclaimer. No funding bodies had any role in study design, data collection and analysis, decision to publish, or preparation of the manuscript. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health (NIH) or the University of California Global Health Institute.

Financial support. This work was supported by the Fogarty International Center, NIH and the University of California Global Health Institute Training Program (grant D43TW009343 to N. K.); the NIH (grant P30MH058107 to the Center for HIV Identification, Prevention, and

Table 1. Evidence-Based Strategies Implemented in Key Populations and Other Epidemics That Could Be Adapted to Increase Human Immunodeficiency Virus Testing Among Men in Low- and Middle-Income Counties

Problem	Solutions
Men do not feel welcome at primary care centers	Create "men-oriented" primary care centers that offer free HIV and sexually transmitted infections services staffed by men for men [9].
Stigma connected to HIV testing	Normalize HIV testing: require that HIV testing is made available and offered to newly married couples, government document and license applicants, prisoners, new employees, those opening bank accounts, those receiving a cellular phone SIM card, those entering military service, those entering government work, those entering government training programs, and those entering educational institutions [10, 11].
HIV testing is primarily conducted in government facilities	Distribute home-based HIV self-tests kits in venues that men frequent (eg, shebeens, churches, bars, clubs, sports facilities) [12, 13].

Abbreviations: HIV, human immunodeficiency virus; SIM, subscriber identity module.

Treatment Services); and the National Institute of Allergy and Infectious Diseases (grant AI028697 to the UCLA Center for AIDS Research).

Potential conflicts of interest. All authors: No reported conflicts of interest. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

Noah Kojima¹ and Jeffrey D. Klausner^{1,2}

¹David Geffen School of Medicine and ²Fielding School of Public Health, University of California, Los Angeles

References

- Nachega JB, Sam-Agudu NA, Mofenson LM, Schechter M, Mellors JW. Achieving viral suppression in 90% of people living with HIV on antiretroviral therapy in low- and middle-income countries: progress, challenges, and opportunities. *Clin Infect Dis* 2018; 66:1487-1491.
- Staveteig S, Croft TN, Kampa KT, Head SK. Reaching the 'first 90': gaps in coverage of HIV testing among people living with HIV in 16 African countries. *PLoS One* 2017; 12:e0186316.
- Grobler A, Cawood C, Khanyile D, Puren A, Kharsany ABM. Progress of UNAIDS 90-90-90 targets in a district in KwaZulu-Natal, South Africa, with high HIV burden, in the HIPSS study: a household-based complex multilevel community survey. *Lancet HIV* 2017; 4:e505-13.
- Auld AE, Shiraiishi RW, Mbofana F, et al. Lower levels of antiretroviral therapy enrollment among men with HIV compared with women—12 countries, 2002-2013. *MMWR Morb Mortal Wkly Rep* 2015; 64:1281-6.
- Department of Health, Republic of South Africa. National HIV testing services: Policy 2016. Pretoria, South Africa, 2016.
- Treves-Kagan S, Steward WT, Ntswane L, et al. Why increasing availability of ART is not enough: a rapid, community-based study on how HIV-related stigma impacts engagement to care in rural South Africa. *BMC Public Health* 2016; 16:87.
- Chikovore J, Gillespie N, McGrath N, Orne-Gliemann J, Zuma T; ANRS 12249 TasP Study

Group. Men, masculinity, and engagement with treatment as prevention in KwaZulu-Natal, South Africa. *AIDS Care* 2016; 28(suppl 3):74-82.

- Hensen B, Taoka S, Lewis JJ, Weiss HA, Hargreaves J. Systematic review of strategies to increase men's HIV-testing in sub-Saharan Africa. *AIDS* 2014; 28:2133-45.
- Nwokolo N, Hill A, McOwan A, Pozniak A. Rapidly declining HIV infection in MSM in central London. *Lancet HIV* 2017; 4:e482-3.
- Klausner JD. The evidence that increased syphilis testing controls syphilis is compelling: what is needed to act? *Clin Infect Dis* 2017; 65:396-7.
- Smith R, Zetola NM, Klausner JD. Beyond the end of exceptionalism: integrating HIV testing into routine medical care and HIV prevention. *Expert Rev Anti Infect Ther* 2007; 5:581-9.
- Estem KS, Catania J, Klausner JD. HIV Self-testing: a review of current implementation and fidelity. *Curr HIV/AIDS Rep* 2016; 13:107-15.
- World Health Organization. Policy brief: WHO recommends HIV self-testing. In: HIV/AIDS. Geneva, Switzerland: World Health Organization, 2016.

Correspondence: N. Kojima, David Geffen School of Medicine, University of California, Los Angeles, 10833 Le Conte Ave, Los Angeles, CA 90095 (nkojima@ucla.edu).

Clinical Infectious Diseases® 2018;67(9):1468-9

Published by Oxford University Press for the Infectious Diseases Society of America 2018. This work is written by (a) US Government employee(s) and is in the public domain in the US. DOI: 10.1093/cid/ciy344

Reply to Kojima and Klausner

TO THE EDITOR—We have noted and agree with the insight provided by Kojima and Klausner that more successful human immunodeficiency virus type 1 (HIV-1) testing of men and engagement in care