

FUNDAÇÃO OSWALDO CRUZ
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**AVALIAÇÃO DAS ESTRATÉGIAS DE RECRUTAMENTO DE HOMENS CIS GAYS,
BISSEXUAIS E OUTROS HOMENS QUE FAZEM SEXO COM HOMENS (HSH),
TRAVESTIS E MULHERES TRANS QUE FAZEM SEXO COM HOMENS PARA
PREVENÇÃO COMBINADA DO HIV**

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Dissertação apresentada ao Curso de Pós-Graduação em Pesquisa Clínica do Instituto Nacional de Infectologia Evandro Chagas (INI) da Fundação Oswaldo Cruz (Fiocruz) para obtenção do grau de Mestre em Pesquisa Clínica, sob a orientação da Prof. Dr.^a Sandra Wagner Cardoso e do Prof. Dr. Thiago Silva Torres

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Daniel Rodrigues de Barros Bezerra

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Dedico esse trabalho ao meu pai, que
sempre me incentivou a “estudar para
evoluir na vida”.

(In memoriam)

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“Eu sou como você me vê. Posso ser leve como uma brisa ou forte como um vendaval,
depende de quando e como você me vê passar.”

Clarice Lispector

Bezerra, D. R. B. Rio de Janeiro, 2021. **Avaliação das estratégias de recrutamento de gays, bissexuais e outros homens que fazem sexo com homens (HSH), travestis e mulheres trans que fazem sexo com homens para prevenção combinada do HIV.** Dissertação [Mestrado Profissional em Pesquisa Clínica] – Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz

RESUMO

Introdução: No Brasil há uma maior prevalência de HIV em populações específicas, como homens que fazem sexo com homens (HSH), travestis e mulheres trans (TMT). Não há dados na literatura sobre estratégias de recrutamento e referenciamento destas populações para serviços de prevenção do HIV do Brasil. **Objetivo:** Avaliar o perfil de HSH e TMT que compareceram ao serviço de prevenção do HIV do INI-Fiocruz. **Metodologia:** Estudo transversal retrospectivo, avaliando HSH e TMT atendidos no Serviço de Prevenção do HIV do INI-Fiocruz entre março de 2018 e outubro de 2019. Recrutamento ou referência ao serviço foi classificado em recrutamento *in loco*, recrutamento online, indicação de amigos, demanda espontânea ou indicação de outros profissionais de saúde. **Artigo 1:** Comparar as características de HSH e TMT de acordo com diferentes estratégias de recrutamento ou encaminhamentos, usando testes qui-quadrado, exato de Fisher e Kruskal-Wallis. De 2.713 pessoas que buscaram o serviço, 82,8% eram HSH e 17,2% TMT. A idade média foi de 27 anos, 64,8% eram negros/pardos, 49,2% concluíram o ensino médio. A prevalência de HIV foi de 19,3% e 10,7% para TGW e HSH, respectivamente. A principal fonte de referência foi por indicação de amigos (43,6%), seguida por recrutamento online (24,1%) e recrutamento *in loco* (16,2%). Jovens e negros HSH foram mais recrutados *in loco*, e HSH com maior escolaridade por recrutamento online. TMT jovens e com maior escolaridade foram mais recrutadas *in loco*. Apenas quatro TMT foram recrutadas por ações online. **Artigo 2:** Descrever a cascata de recrutamento online de HSH e comparar diferentes veículos digitais de recrutamento. A campanha de marketing digital atingiu mais de 1.500.000 pessoas; 1270 HSH entraram em contato com um educador de pares e 36,3% (462/1270) compareceram ao serviço de prevenção do HIV sendo 73% via propaganda em aplicativos de encontros (Grindr: 37,9%; Hornet: 35,1%) e 36% via mídia social. Comparando os HSH de acordo com o recrutamento, os HSH recrutados via aplicativos (Grindr/Hornet) eram mais velhos, a maioria brancos, de maior escolaridade, e reportaram maior risco de infecção pelo HIV. Mídias sociais tiveram menor custo no recrutamento de HSH para o serviço de prevenção e PrEP. **Conclusão:** Diferentes estratégias de recrutamento combinadas são necessárias para acessar mais amplamente HSH e TMT em sua pluralidade.

Palavras-chave: HIV; Prevenção; Minorias sexuais e de gênero; Brasil; Recrutamento.

Bezerra, D. R. B. B. Rio de Janeiro, 2021. **Evaluation of recruitment strategies for gay, bisexual and other men who have sex with men (MSM), transvestites and transgender women who have sex with men for combined HIV prevention.** Dissertação [Mestrado Profissional em Pesquisa Clínica] – Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz

ABSTRACT

Introduction: HIV prevalence in Brazil is higher among specific populations, such as men who have sex with men (MSM) and transgender women (TGW). No data on strategies for recruiting and referring these populations to HIV prevention services is available in Brazil. **Objective:** To describe the characteristics of MSM and TGW who attended the HIV prevention service at INI-Fiocruz. **Methodology:** Retrospective cross-sectional study, evaluating MSM and TGW who attended the HIV Prevention Service at INI-Fiocruz between March 2018 and October 2019. Recruitment or referral to the service was classified as venue-based recruitment, web-based recruitment, peer-referral, self-referral and health professional's referrals. **Article 1:** Compare the characteristics of MSM and TGW according to different recruitment or referral strategies, using chi-square, Fisher's exact and Kruskal-Wallis tests. Of 2,713 individuals who attended the service, 82.8% were MSM and 17.2% were TGW. Mean age was 27 years, 64.8% were Black/Pardo, 49.2% completed secondary education. HIV prevalence was 19.3% and 10.7% for TGW and MSM, respectively. Main source of recruitment/referral was peer-referral (43.6%), followed by web-based recruitment (24.1%) and venue-based recruitment (16.2%). Young and black MSM were more recruited on venue-based recruitment, and MSM with higher education through web-based recruitment. Young and more educated TGW were more frequently recruited through venue-based recruitment. Only four TGW were recruited from web-based strategies. **Article 2:** Describe the MSM online recruitment cascade and compare different web-based recruitment strategies. The marketing campaign reached over 1,500,000 individuals; 1270 MSM contacted a peer educator and 36.3% (462/1270) attended the HIV prevention service (Grindr: 37.9%; Hornet: 35.1%; social media: 36.0%). Comparing MSM according to recruitment, MSM from the apps (Grindr/Hornet) were older, white, more educated, and reported a higher risk of HIV infection. Social media was less expensive to recruit MSM for the HIV prevention service and for PrEP use. **Conclusion:** Different combined recruitment strategies are needed to access MSM and TGW in their plurality.

Keywords: HIV, prevention, sexual and gender minorities, Brazil, recruitment

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LISTA DE ABREVIATURAS

CDC	<i>Centers for Disease Control and Prevention</i>
FDA	<i>US Food and Drug Administration</i>
FTC	Entricitabina
HSH	Homens que fazem sexo com homens
ImPrEP	Projeto de Implementação de PrEP
<i>In Loco</i>	Recrutamento de campo (corpo-a-corpo)
INI	Instituto Nacional de Infectologia
IST	Infecções sexualmente transmissíveis
LapClin AIDS	Laboratório de Pesquisa Clínica em HIV/AIDS
OMS	Organização Mundial de Saúde
PEP	Profilaxia pós exposição
PrEP	Profilaxia pré exposição
SUS	Sistema Único de Saúde
TAR	Terapia antirretroviral
TasP	<i>treatment as prevention</i> tratamento como forma de prevenção
TDF	tenofovir diproxil fumarato
TMT	Travestis e mulheres trans
USP	Universidade de São Paulo

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1. Introdução

1.1. Epidemiologia do HIV

Aproximadamente 77,5 milhões de pessoas foram infectadas pelo HIV globalmente desde o início da epidemia e cerca de 34,7 milhões de pessoas morreram de causas relacionadas à aids. Em 2020, aproximadamente 37,6 milhões de pessoas viviam com HIV, 1,5 milhão de pessoas foram infectadas pelo HIV, 690.000 morreram de doenças relacionadas à aids e 27,4 milhões acessavam a terapia antirretroviral (TAR) (UNAIDS, 2021).

A América Latina possui 2,1 milhão de casos de HIV, sendo a quarta região em número de pessoas vivendo com HIV, e apresenta 110.000 novas infecções por HIV. Cerca de 90% das novas infecções por HIV na América Latina ocorreram em 10 países, metade delas no Brasil (49%) (UNAIDS, 2021). No Brasil mais de 1.000.000 pessoas viviam com HIV em 2020. Dados de vigilância nacional indicam que mais de 340.000 novas infecções por HIV foram diagnosticadas de 2007 a 2020, 69% delas entre homens (BRASIL, MINISTÉRIO DA SAÚDE, 2020). Ainda assim, os casos em HSH são provavelmente subnotificados como homens classificados como heterossexuais (30% dos casos masculinos) e de risco desconhecido (13% dos casos masculinos) devido ao estigma (ARAÚJO et al., 2009; MAGNO et al., 2019).

Um estudo populacional de prevalência de HIV estimou que 18,4% dos HSH no Brasil viviam com HIV em 2016 (KERR et al., 2018b), superior as estimativas encontradas em estudo semelhante realizado anteriormente em 2009, 14,2% (KERR et al., 2013). Os HSH pesquisados em 2016 eram consideravelmente mais jovens do que aqueles de 2009 (GUIMARÃES et al., 2018). Dados de uma revisão sistemática sobre prevalência de HIV entre HSH apontam para um aumento da prevalência de HIV entre os HSH de 18-24 anos em diversas cidades do Brasil (COELHO et al., 2021a).

As travestis e as mulheres trans que fazem sexo com homens são pessoas que vivenciam um contexto de marginalização social e econômica, em que são frequentes situações de preconceito, violência, discriminação, falta de suporte familiar e social, obstáculos ao reconhecimento legal e social de sua identidade de gênero, exclusão da educação escolar e do mercado de trabalho (POTEAT; REISNER; RADIX, 2014; WILSON et al., 2015). Tais situações extremas se associam a baixa escolaridade, uso abusivo de álcool e drogas, envolvimento com sexo transacional e terminam por configurar-se como um círculo vicioso, em que se perpetua a exclusão social das travestis e mulheres trans. Este contexto está vinculado

diretamente à elevada vulnerabilidade das travestis e mulheres trans à infecção pelo HIV e outras IST.

Foi estimado em uma metanálise que TMT apresentam 49 vezes mais chances de infecção pelo HIV em comparação com a população geral (BARAL et al., 2013). Em estudo realizado pelo Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz (INI-Fiocruz), o primeiro de base populacional que avaliou a prevalência de HIV entre travestis e mulheres trans do Rio de Janeiro, Brasil, indica que as travestis e mulheres trans têm uma prevalência de HIV maior do que qualquer outra população-chave, de 33% (GRINSZTEJN et al., 2017).

1.2. Prevenção combinada do HIV

A prevenção combinada da infecção pelo HIV engloba um leque diversificado de tecnologias em estágios diferentes de desenvolvimento, incluindo: (a) uso de microbicidas retais e vaginais; (b) a profilaxia pré-exposição (PrEP) que consiste no uso de antirretrovirais como uma estratégia de prevenção entre as pessoas HIV negativas em risco de contrair o HIV; (c) profilaxia pós-exposição (PEP) que consiste no uso de antirretrovirais após a exposição ao HIV; (d) a vacinação; (e) circuncisão masculina; (f) a testagem, vínculo e retenção nos cuidados ("test-and-treat"); e (g) adesão reforçada entre pessoas vivendo com HIV; (h) tratamento como prevenção ou TasP ("treatment as prevention") (BROWN; SALES; DICLEMENTE, 2014).

Consiste na associação de diferentes métodos (ações) de prevenção ao HIV, às IST e às hepatites virais (ao mesmo tempo ou em sequência), conforme as características e o momento de vida de cada pessoa. A premissa básica é a de que estratégias de prevenção devem considerar as especificidades dos sujeitos e de seus contextos de vida.

Entre os métodos (ações) que podem ser combinados (as), estão: a testagem regular para o HIV; a prevenção da transmissão vertical, o tratamento das infecções sexualmente transmissíveis e das hepatites virais; a imunização para as hepatites A e B; programas de redução de danos para usuários de álcool e outras substâncias; profilaxia pré-exposição (PrEP); profilaxia pós-exposição (PEP); e o tratamento de pessoas que já vivem com HIV e o uso do preservativo.

Os pacotes de prevenção combinada podem consistir em diferentes componentes, como aconselhamento e testagem expandidos, intervenções de promoção de comportamento mais seguro, expansão dos serviços do tratamento de pacientes infectados pelo HIV, e intervenções especiais direcionadas aos grupos em maior situação de vulnerabilidade. Dentre as diferentes abordagens, a avaliação de risco, a testagem, o tratamento precoce e medidas biomédicas de prevenção tem recebido crescente importância no enfrentamento da epidemia do HIV.

1.3. Profilaxia Pré-exposição (PrEP)

O desenvolvimento da PrEP iniciou em meados dos anos 2000 (WHO, 2015). A primeira evidência da sua eficácia foi vista em 2010, no estudo Caprisa 004, para o gel vaginal de tenofovir entre as mulheres com idade entre 18-40 anos na África do Sul, demonstrando 39% de eficácia contra o HIV (ABDOOL KARIM et al., 2010). O estudo randomizado “Partners”, que incluiu 4.758 casais sorodiscordantes para o HIV no Quênia e em Uganda, demonstrou uma redução de 62% na incidência na infecção pelo HIV entre os parceiros usando dose diária oral de tenofovir diproxil fumarato (TDF) e redução de 73% entre aqueles que fizeram dose diária de entricitabina e TDF (FTC/TDF). O estudo também demonstrou uma redução de 100% na incidência da infecção pelo HIV entre os participantes com adesão ao medicamento. No estudo randomizado verificou-se que uma dose única diária de FTC/TDF reduziu em 63% a incidência de HIV entre homens e mulher cisgêneros (WARE et al., 2012).

O estudo iPrEx (Iniciativa de Profilaxia Pré-Exposição), foi um estudo randomizado controlado por placebo que demonstrou uma redução de 44% na incidência de HIV entre HSH que receberam uma dose diária de FTC/TDF. Dentre os voluntários com maior adesão à profilaxia, houve menor número de infecções, tendo sido demonstrada 90% de eficácia entre aqueles com níveis sanguíneos detectáveis do medicamento, indicando a importância da adesão ao uso do medicamento para a profilaxia (GRANT et al., 2010).

As evidências demonstradas no estudo iPrEx e outros estudos de PrEP serviram de subsídios para a aprovação do uso oral diário de FTC/TDF pelo FDA (US Food and Drug Administration) para a prevenção da transmissão sexual do HIV em julho 2012. Em maio de 2014, o CDC (Centers for Disease Control and Prevention) publicou as primeiras diretrizes de prática clínica de PrEP.

Evidências dos estudos iPERGAY e PROUD na França e Inglaterra confirmaram os altos níveis de eficácia do uso oral de FTC/TDF, além de demonstrarem que indivíduos em alto risco de contrair HIV apresentaram altos níveis de adesão (MAYER, 2015; MOLINA et al., 2015).

Em 2012, logo após a aprovação do FDA, a Organização Mundial de Saúde (OMS) recomendou que os países desenvolvessem estudos locais de demonstração da implementação da PrEP para que os problemas pudessem ser identificados em larga escala e adequadamente encaminhados. Os dados produzidos a partir de estudos tiveram por objetivo subsidiar as ações para a introdução da PrEP nos programas de prevenção do HIV, tanto nos países de alta prevalência como naqueles com epidemias concentradas em grupos vulneráveis, como o Brasil.

O projeto PrEP Brasil foi um estudo prospectivo, aberto, multicêntrico, demonstrativo que teve como objetivo avaliar a aceitação, segurança e viabilidade do uso oral diário de FTC/TDF para HSH, travestis e mulheres trans em alto risco de se infectar pelo HIV. O projeto, coordenado pelo INI-Fiocruz, foi realizado em cinco centros de referência para o tratamento e prevenção do HIV no Brasil nas cidades do Rio de Janeiro (INI-Fiocruz), São Paulo (Universidade de São Paulo – USP - Centro de Referência e Treinamento de São Paulo), Manaus (Fundação de Medicina Tropical) e Porto Alegre (Hospital Sanatório Partenon). Após um ano, foi observada uma alta aceitabilidade, retenção e adesão a PrEP oral diária entre 450 participantes do Rio de Janeiro e São Paulo (GRINSZTEJN et al., 2018). Estes resultados serviram de subsídios para a implementação da PrEP como política pública no Brasil dentro do pacote de prevenção combinada oferecido pelo Sistema Único de Saúde (SUS) (HOAGLAND et al., 2017b; LUZ et al., 2018; PAHO, 2018).

O projeto de Implementação da PrEP (ImPrEP) está sendo realizado no Brasil, no México e no Peru com o objetivo geral de abordar os aspectos estratégicos sobre a implementação da PrEP oral diária. Apesar de serem países de renda média, Brasil, México e Peru têm profundamente enraizadas as desigualdades como característica comum. Nos três países, HSH, travestis e pessoas trans em risco de se infectarem pelo HIV são as populações-alvo, uma vez que enfrentam níveis muito elevados de estigma e discriminação e tem a prevalência de HIV elevada (BAUTISTA-ARREDONDO et al., 2013; CLARK et al., 2014; GUIMARÃES et al., 2018).

Outras tecnologias para PrEP estão em desenvolvimento, incluindo antirretrovirais de uso oral e injetável, microbicidas, anticorpos monoclonais, anéis vaginas e implantes (COELHO et al., 2019). O objetivo é disponibilizar outras tecnologias de PrEP em que os

indivíduos não dependam da tomada diária ou quase diária de comprimidos. O desenvolvimento de tecnologias alternativas para a PrEP e esquemas mais amigáveis à adesão atualmente disponíveis, podem aumentar as opções de prevenção e a aceitabilidade na população.

A PrEP injetável de ação prolongada tem o potencial de impedir a aquisição do HIV sem depender da adesão a um regime oral diário. O estudo HPTN 083 é o primeiro ensaio clínico de fase 3 de um medicamento injetável de ação prolongada (cabotegravir) com potencial para ser usado na prevenção ao HIV. O estudo demonstrou que uma injeção de cabotegravir a cada 8 semanas é segura e altamente eficaz para prevenir o HIV em homens cisgêneros, travestis e mulheres trans que fazem sexo com homens (LANDOVITZ et al., 2020).

O estudo AMP (HPTN 085) foi um ensaio clínico de fase 2 que avaliou a aceitabilidade da infusão do anticorpo monoclonal VRC01 para a prevenção do HIV entre HSH, travestis e mulheres trans. Este foi o primeiro estudo a testar a eficácia de anticorpos em pessoas não infectadas pelo HIV. A conclusão foi que o VRC01 não evitou a aquisição geral do HIV-1 de forma mais eficaz do que o placebo, mas as análises de isolados de HIV-1 sensíveis ao VRC01 forneceram uma prova de conceito de que a profilaxia com anticorpos monoclonais pode ser eficaz (COREY et al., 2021).

1.4. Recrutamento

O termo “recrutamento” é ter atitude em recrutar. Seu significado teve origem inicialmente nos exércitos, onde captar recrutas para vagas de futuros soldados ou postos de guerrilha era habitual. Rapidamente o termo, bem como seu objetivo (captação de pessoas), foi incorporado e chamado Recursos Humanos (RH), em especial, ao subsistema de Recrutamento e Seleção de Pessoal (GIL, 2001).

Diversas áreas de atuação utilizam estratégias de recrutamento para atingir seus objetivos. Como citado, o exército deu origem ao termo que foi aplicado à área de Recursos Humanos, mas não fica restrito de forma literal. No marketing, por exemplo, é possível chamar de recrutamento a captação de clientes através de uma campanha. O conceito base de captar para vagas pode ser adaptado a convocar para uma intervenção ou divulgar uma ação. Visto que, em todos os exemplos, é necessária a identificação de um perfil, a divulgação do mesmo através de uma propaganda e sua veiculação. Sendo assim, podemos aplicar este conceito de recrutamento para estudos clínicos.

1.5. Recrutamento para estudos clínicos em HIV

Diferentes estratégias podem ser usadas para o recrutamento de voluntários, tais como campanhas de marketing, envio de mala direta (e-mail) e contato telefônico (LOVATO et al., 1997).

Recrutar participantes adequados está entre as barreiras mais desafiadoras e caras para o sucesso de um estudo (KASENDA et al., 2014). Tradicionalmente, o recrutamento tem se baseado em estratégias como referências de médicos, publicidade na mídia (ou seja, televisão, rádio e jornal) e alcance focado para encontrar participantes em potencial - estratégias que podem ser limitadas em seu alcance humano e geográfico.

Novas estratégias estão sendo adotadas para ampliar o alcance da informação para atingir de forma mais ampla, novos indivíduos, tais como mídias sociais (Facebook, Instagram) e aplicativos de relacionamentos (Grindr, Hornet), como observado em estudos recentes (IOTT et al., 2018a; MARTINEZ et al., 2014a)

Todos os ensaios clínicos randomizados precisam recrutar participantes e isso costuma ser um desafio. O recrutamento insuficiente pode levar a um estudo de baixo poder, que pode relatar efeitos clinicamente relevantes como estatisticamente não significativos. Um achado não significativo aumenta o risco de que uma intervenção eficaz seja abandonada antes que seu valor verdadeiro seja estabelecido, ou de que haja um atraso na demonstração desse valor enquanto mais ensaios ou meta-análises são realizados. Ensaios de baixa potência também levantam um problema ético: os pesquisadores expuseram os participantes a uma intervenção com benefício incerto, mas ainda podem ser incapazes de determinar se a intervenção faz mais bem do que mal ao ser concluída. O recrutamento insuficiente também pode levar à extensão do ensaio, aumentando os custos (REBE; HOOSEN; MCINTYRE, 2019).

Pesquisas e intervenções relacionadas ao HIV/aids requerem recrutamento de populações vulneráveis de acordo com a região do estudo, como HSH, travestis e mulheres trans. Conseqüentemente, existe a necessidade de desenvolver métodos de recrutamento destas populações, e para fazê-lo é necessário compreender os pontos fortes e as limitações de diferentes abordagens de recrutamento (WOODYATT; FINNERAN; STEPHENSON, 2016).

1.6. Histórico de recrutamento para estudos de prevenção do HIV no LaPClin-AIDS do INI-Fiocruz

O Laboratório de Pesquisa Clínica em IST e AIDS (LaPClin Aids) é um dos dezenove laboratórios do INI/Fiocruz. Há décadas vem desenvolvendo pesquisas, fornecendo serviços para o SUS, e estabelecendo parcerias nacionais e internacionais. Dentre os projetos em andamento destacam-se as coortes longitudinais (clínica de HIV, de mulheres cisgênero HIV positivas, mulheres trans, hepatite C); estudos transversais; ensaios clínicos randomizados; pesquisas em PrEP e autotestagem do HIV. Com uma produção relevante na área de HIV/aids, destaca-se o trabalho pioneiro de educação comunitária realizada desde o começo dos anos 2000, em especial o trabalho de recrutamento.

Estratégias distintas de recrutamento foram realizadas para alcançar o perfil necessário para cada estudo. Durante o estudo iPrEX (2008) foram iniciadas as atividades de recrutamento *in loco* com educadores de pares em locais frequentados por HSH, travestis e mulheres trans. Educadores de pares são populações-chave ativas que fazem divulgação em locais onde praticam trabalho sexual ou procuram parceiros sexuais. Eles devem ter conhecimento do contexto local, aceitabilidade e responsabilidade perante a comunidade e o programa, serem capaz de manter a confidencialidade e ter boas habilidades de escuta e comunicação interpessoal (UNPF, 2016). Os educadores de pares distribuíam panfletos, kits de prevenção contendo camisinha e gel lubrificante e colavam cartazes em saunas, boates e locais de encontro para sexo. Todos os materiais continham os contatos do LaPClin-AIDS para que os interessados pudessem buscar diretamente o serviço ou ligar e agendar uma visita de avaliação de risco, que incluía oferecimento do teste rápido de HIV e informações sobre o estudo (GRANT et al., 2010).

Durante o estudo PrEP Brasil (2014-2016), iniciou-se a estratégia de recrutamento online. Foram criados uma página na web (www.prepbrasil.com.br) e um perfil no Facebook (@prepbrasil) para divulgar o estudo e aumentar a conhecimento sobre as tecnologias de prevenção combinada incluindo a PrEP. Os voluntários que entravam em contato por e-mail, na página do Facebook ou pelo Facebook Messenger eram orientados a fazer contato com os educadores comunitários por telefone para obter mais informações e agendar uma visita de avaliação de risco (GRINSZTEJN et al., 2018; MARINS et al., 2019)

Durante os anos 2017 e 2018, novos estudos de prevenção (HPTN083 e HPTN085), além do projeto de demonstração ImPrEP, foram iniciados no LaPClin-AIDS. Além disso, foi

introduzido o atendimento ambulatorial de saúde sexual e oferta de prevenção combinada incluindo a PrEP oral diária fornecida pelo SUS.

Devido à grande demanda, houve a necessidade de reformular a estrutura de recrutamento do laboratório com o objetivo principal de aumentar a oferta de estudos de prevenção ao HIV junto às populações de HSH, travestis e mulheres trans, em especial os grupos em maior situação de vulnerabilidade, moradores de áreas periféricas e com pouco acesso à informação. Assim, foram idealizadas estratégias de ações combinadas de recrutamento online e *in loco*.

1.7. Serviço de prevenção do HIV do INI-Fiocruz

O Laboratório de Pesquisa Clínica de HIV do INI-Fiocruz é composto por equipe multidisciplinar que inclui equipe de educação comunitária profissionais de saúde (psicólogos, médicos, enfermeiras, farmacêuticos e técnicos de laboratório) e equipe administrativa responsável pelo fluxo de atendimento.

Ao chegar ao serviço, a pessoa é recebida por uma recepcionista que identifica o motivo da visita e entrega uma senha. Nesse momento, o profissional responsável por organizar o fluxo de atendimento começa a monitorar essa pessoa para que todos os procedimentos da visita sejam realizados. Os psicólogos são responsáveis pelo aconselhamento pré-teste do HIV, que inclui questionário de avaliação de risco e comportamento sexual. Em seguida, se aplicável, a pessoa é encaminhada para o laboratório para fazer a coleta de sangue conforme o algoritmo de testagem da rotina. O responsável pelo fluxo acompanha a pessoa novamente ao aconselhador para receber o aconselhamento pós-teste do HIV. O aconselhador apresenta o resultado do teste e, caso não reagente, discute as opções de prevenção combinada disponíveis e aplicáveis àquela pessoa, incluindo a oferta para conhecer os estudos em andamento, PrEP e PEP. No caso de resultado do teste de HIV reagente, a pessoa é encaminhada para inserção no acompanhamento clínico e início do tratamento, caso o resultado seja confirmado.

A Equipe de Educação Comunitária do Serviço de Prevenção do HIV do INI-Fiocruz é responsável pelo acolhimento das pessoas, que é feito através do diálogo, permitindo a discussão de questões pessoais e a criação de um vínculo com o educador de par. Esse vínculo é fundamental para a retenção no serviço de prevenção ou tratamento do HIV. A equipe também é responsável pelo recrutamento *in loco*, feito através de intervenções em pontos mapeados onde se reúnem pessoas em alta situação de vulnerabilidade. A equipe é diversa, composta por

educadores de pares de diferentes formações, idades, etnias e identidades de gênero. Durante o período de permanência no serviço, a equipe de Educação Comunitária está disponível para sanar dúvidas e questionamento de seus pares, tornando o ambiente amigável e acolhedor.

2. Justificativa

No Brasil, 77% da população tem acesso à internet. Entre aqueles que recebem até um salário mínimo por mês, 65% têm acesso à Internet. Segundo estimativas, 83% dos brasileiros têm telefone celular e 97% acessam à internet e aplicativos por este dispositivo (TICS, 2018).

Os aplicativos de relacionamento voltados para o público HSH (ex. Grindr, Hornet) são populares no Brasil, sendo uma ferramenta útil para acessar essa população. Em uma metanálise recente, verificou-se que HSH recrutados através destes aplicativos apresentaram maior diagnóstico de ISTs do que os recrutados por outras mídias sociais ou *in loco* (WANG et al., 2018a). Em uma pesquisa na web coordenada pela Fiocruz com 11.367 HSH brasileiros em 2018, 93% relataram o uso de aplicativos para procurar parceiros sexuais e 53% relataram o uso diário destes aplicativos (TORRES et al., 2019a).

Estudos realizados em países de alta renda demonstraram que o impacto através de campanhas online ainda é um fator excludente, pois as pessoas alcançadas são, em sua maioria, brancas de média e alta renda (IOTT et al., 2018a; SUN et al., 2018). Desta forma, o recrutamento *in loco* ainda seria necessário para atingir parcelas da população mais vulneráveis e sem acesso à internet. Por outro lado, em dois estudos online avaliando o perfil de HSH que utilizavam Grindr e Hornet, observou-se um aumento da participação de pessoas não brancas, de menor renda e menos escolarizadas entre 2016 e 2017 no Brasil (TORRES et al., 2018a, 2019c). Considerando este cenário, aplicativos de relacionamento para HSH mostram-se canais com potencial para o recrutamento de HSH em alto risco de infecção pelo HIV, em diversos extratos sociais.

Não existem dados na literatura avaliando as estratégias de recrutamento para prevenção combinada do HIV no Brasil.

3. Objetivos

3.1. Objetivo Geral

O objetivo geral desse trabalho é avaliar o perfil de homens, travestis e mulheres trans que fazem sexo com homens que compareceram ao serviço de prevenção do HIV do INI-Fiocruz entre março de 2018 e outubro de 2019.

3.2. Objetivos Específicos

- Comparar o perfil sociodemográfico dos HSH e TMT que compareceram ao serviço de prevenção do HIV impactados por métodos de recrutamento (online e *in loco*), referenciados por pares, outros profissionais de saúde e por demanda espontânea.
- Comparar o perfil sociodemográfico das travestis e mulheres trans impactadas por métodos de recrutamento (online e *in loco*), referenciadas por pares, outros profissionais de saúde e por demanda espontânea.
- Descrever a cascata de PrEP entre HSH e TMT.
- Descrever a cascata de recrutamento online de HSH em aplicativos (Grindr e Hornet) e mídias sociais (Facebook e Instagram) desde o início das campanhas online até o atendimento no serviço de prevenção do HIV.
- Comparar o perfil sociodemográfico dos HSH que compareceram ao serviço de prevenção do HIV por aplicativos e mídias sociais.
- Mensurar o custo por HSH que compareceu ao serviço de prevenção do HIV, considerando os valores gastos com o recrutamento online.

4. Metodologia

4.1. Desenho do Estudo

Estudo transversal retrospectivo, avaliando os atendimentos realizados no Serviço de Prevenção do HIV do INI-Fiocruz entre março de 2018 e outubro de 2019.

4.2. População do estudo

Homens cisgênero gays, bissexuais ou outros homens que fazem sexo com homens (HSH), travestis e mulheres trans (TMT) que fazem sexo com homens, acima de 18 anos que compareceram ao serviço de prevenção do HIV, no INI-Fiocruz para uma avaliação de risco, testagem de HIV e acesso a prevenção combinada do HIV.

4.3. Fluxo de recrutamento

Os procedimentos, desde as ações online e *in loco*, até a inclusão de voluntários em estudos, estão descritos abaixo (Figura 1).

Figura 1. Fluxo de Recrutamento dos potenciais voluntários



4.4. Recrutamento *in loco*

O recrutamento *in loco* foi realizado por educadores de pares do Serviço de Prevenção do HIV do INI-Fiocruz em bares, saunas, Paradas LGBTQIA+ e pontos de sexo comercial. A equipe dialogava e convidava as pessoas abordadas a comparecerem ao INI-Fiocruz para testagem, avaliação de risco e esclarecimento sobre os estudos e projetos de prevenção do HIV. Durante as abordagens foram distribuídos kits de prevenção contendo folheto explicativo sobre prevenção e cuidado com saúde sexual, camisinha e gel lubrificante. Os educadores de par coletaram nome e telefone para agendamento.

4.5. Recrutamento online

O recrutamento online foi feito através de ações em mídias sociais (Facebook e Instagram) e nos aplicativos de relacionamento (Grindr e Hornet). No Facebook e Instagram as

ações foram direcionadas para públicos alvo específicos, pessoas com interesses em comunidades, artistas e influenciadores LGBTQI+, com o objetivo de impactar os HSH com mais de 18 anos. Nos aplicativos de relacionamento, Grindr e Hornet, foram veiculadas mensagens diretas sobre prevenção voltadas para os usuários dos aplicativos, já que o público que acessa esses aplicativos são, em sua maioria, HSH. Foi disponibilizado e-mail, número de telefone fixo e celular incluindo WhatsApp nas propagandas veiculadas nos canais digitais.

4.6. Agendamento

Após o primeiro contato por telefone ou e-mail, era feito um agendamento para avaliação de risco e testagem de HIV com um psicólogo aconselhador no INI – Fiocruz. Com o intuito de organizar e agilizar o processo de agendamento, foi utilizada a ferramenta de agendamento do Google, na qual todos os profissionais envolvidos no fluxo de atendimento do Serviço de Prevenção do HIV tinham acesso (recepcionista, educadores de par, aconselhadores e recrutadores).

Demanda espontânea a partir de busca na internet e indicação de amigos também eram formas de acesso ao Serviço de Prevenção do HIV do INI-Fiocruz. Essas pessoas eram encaixadas na agenda, na ordem que chegavam ao Centro ou agendadas para outro dia.

4.7. Avaliação de risco, oferta de testagem do HIV e prevenção combinada

Ao chegar ao Serviço de Prevenção do HIV do INI-Fiocruz, as pessoas recrutadas preenchiam uma ficha de cadastro com informações básicas como nome, CPF, identidade, idade, bairro, raça, escolaridade, telefone. Em seguida eram atendidas por um psicólogo que realizava a avaliação de risco, pré-teste sobre prevenção combinada e saúde sexual e depois encaminhadas para testagem rápida de HIV, caso concordassem. Após o resultado, caso não reagente, o aconselhador explicava detalhadamente os estudos e projetos de prevenção e as convidavam a leitura do termo de consentimento do projeto para o qual melhor se adequasse ou eram encaminhadas para o programa de PrEP ofertado pelo SUS.

Para as pessoas que não tinham o perfil necessário ou não aceitaram participar por motivos pessoais eram distribuídos kits de prevenção com camisinha, gel lubrificante e *folders* informativos. Os que tiveram teste rápido de HIV reagente eram encaminhados para atendimento clínico e tratamento.

4.8. Cascata de recrutamento online

Para a descrição da cascata online de recrutamento foram consideradas as seguintes etapas voltadas para a população de HSH:

- a. atingidos pelas ações nos aplicativos de relacionamento, Grindr e Hornet e nas mídias sociais Facebook e Instagram;
- b. que entraram em contato através de Facebook Messenger, e-mail ou WhatsApp disponibilizados nas ações;
- c. que compareceram para avaliação;

Os dados sobre as ações online, alcance, impressões, valor gasto e tempo de veiculação, foram obtidos através de relatórios gerados das redes sociais e aplicativos de relacionamento.

4.9. Custo das ações online

Os custos por participante foram calculados para apps (Grindr e Hornet) e mídias sociais (Facebook e Instagram), sendo apresentados: (1) número de pessoas que compareceram ao Serviço de Prevenção do HIV dividido pelo total custo da propaganda e (2) número de pessoas que receberam PrEP dividido por custo total da propaganda (IOTT et al., 2018a).

4.10. Análise Estatística

Foi feita uma análise estatística descritiva comparando o perfil sociodemográfico, elegibilidade para PEP ou PrEP e início de PEP ou PrEP para HSH e travestis/mulheres trans separadamente, considerando como a pessoa foi referenciada ao Serviço de Prevenção do HIV. Entre os HSH, a referência ao serviço foi categorizada em cinco grupos: recrutamento online, recrutamento *in loco*, referenciado por pares, demanda espontânea e referenciado por outros profissionais de saúde. Para travestis e mulheres trans, três grupos foram criados: recrutamento *in loco*, referenciado por pares, e outros (recrutamento online, demanda espontânea e referenciado por outros profissionais de saúde).

Entre os HSH, as mesmas variáveis também foram comparadas considerando apenas o recrutamento online, sendo o recrutamento dicotomizado em: apps (Grindr e Hornet) e mídias sociais (Facebook e Instagram). Para as variáveis contínuas, foi realizado o Teste de Kruskal-Wallis para comparação entre medianas. As variáveis categóricas foram avaliadas através dos

testes qui-quadrado e exato de Fisher. Considerou-se o nível de significância estatístico de 5% ($p < 0,05$).

4.11. Aspectos Éticos

Este estudo foi submetido e aprovado pelo CEP do INI em 18 de fevereiro de 2020, com número de CAAE: 26095519.1.0000.5262 (ANEXO 1).

5. Resultados e Discussão

Os resultados e discussão desta dissertação foram descritos na forma de dois artigos científicos.

Artigo 1: Complimentary recruitment strategies to reach high-risk MSM and transgender women: the experience of a large Brazilian HIV prevention service

Submissão: LGBT Health (submissão pendente)

Artigo 2: Using web-based venues to recruit gay, bisexual and other men who have sex with men to a large HIV prevention service in Brazil

Submissão: JMIR (submissão pendente)

Os resultados desta dissertação foram aceitos e apresentados na forma de três pôsteres na Conferência Internacional de AIDS 2020, realizada de forma virtual de 06 a 10 de julho de 2020 (ANEXOS 2, 3 e 4):

- Abstract PEC0557: Online cascade of MSM recruitment to a large PrEP service in Rio de Janeiro, Brazil
- Abstract PED1303: Online and venue-based recruitment strategies are complementary to reach high risk MSM for a large PrEP service in Rio de Janeiro, Brazil
- Abstract PED1308: Reaching and engaging transwomen: a successful recruitment cascade in an HIV prevention service in Rio de Janeiro, Brazil

5.1. Artigo 1

**Complimentary recruitment strategies to reach high-risk MSM and transgender women:
the experience of a large Brazilian HIV prevention service**

Running Head (52/50 characters): Reaching sexual/gender minorities for HIV prevention

Abstract (247/250 words)

Purpose:

Different strategies may be used to reach and engage men who have sex with men (MSM) and transgender women (TGW) for HIV prevention services, including web-based and venue-based recruitment. We aimed to describe the characteristics of MSM and TGW who attended a large HIV prevention service in Rio de Janeiro, Brazil according to different recruitment strategies or referrals.

Methods:

This cross-sectional study included MSM and TGW who attended the HIV prevention service from March-2018 to October-2019. Recruitment/referral included web-based or venue-based recruitment, peer-referral, self-referral and health professional's referrals. MSM and TGW characteristics were compared according to the recruitment/referral source, separately.

Results:

A total of 2713 individuals (2246[82.8%] MSM and 467[17.2%] TGW) attended the HIV prevention service. Overall, median age was 27 years, 64.8% were Black/Pardo, 49.2% completed secondary school. HIV prevalence was 19.3% and 10.7% for TGW and MSM, respectively. Among HIV-negative individuals, 74.6% and 82.8% of MSM and TGW were

eligible for pre-exposure prophylaxis (PrEP), respectively. PrEP uptake was 56.4% and 39.1%, respectively. Participants were mostly referred by peers (43.6%), followed by web-based (24.1%) and venue-based recruitments (16.2%). Young and Black MSM were more referred from venue-based recruitment, and web-based strategies more frequently referred MSM with higher education. Young and TGW with higher education were more frequently referred from venue-based recruitment. Web-based recruitment failed to reach TGW for HIV prevention strategies.

Conclusion:

Multiple strategies are complementary to reach diverse populations of key populations. Web-based and venue-based strategies may be combined to successfully reach high-risk MSM.

Adding peers is of utmost importance to reach and recruit TGW.

Key words: sexual and gender minorities, MSM, transgender women, PrEP, recruitment, Brazil

(4-6)

Introduction

Brazil has the largest population of people living with HIV in Latin America, with the epidemic centered in urban areas and in vulnerable populations such as sexual and gender minorities (SGM).¹ Overall, HIV prevalence in the Brazil is considered stable and low (0.4%),² while estimates among cisgender gay, bisexual and other men who have sex with men (MSM) and transgender women (TGW) are 18.4%³ and 25.0%,⁴ respectively. Meanwhile, emerging evidence points to resurging HIV among young SGM (aged 18-24 years),⁵ including high case detection rates at HIV testing sites.⁶

Prior studies have shown that Brazilian SGM are more likely to engage in behaviors associated with increased HIV risk, such as condomless receptive anal sex⁷⁻¹¹ and chemsex.¹² Although the effect of these behaviors may be mitigated by pre-exposure prophylaxis (PrEP), post-exposure prophylaxis (PEP) and treatment as prevention (TasP), all available free of charge through the Brazilian Public Health System (SUS),¹³ almost 30% of Brazilian MSM have never heard about PrEP⁹ and 17% have never tested for HIV, with higher proportions in lower income regions.¹⁴ Moreover, the HIV prevention continuum is very poor among TGW,¹⁵ especially young.¹⁶

Rio de Janeiro metropolitan area, which has more than 13 million inhabitants, is the second largest in Brazil and the 16th in the world.¹⁷ As seen in other major Latin American cities, Rio de Janeiro has a disproportionately large number of under resourced and disadvantaged people who live in slums or on the outskirts of the city. These deep social inequalities have great consequences for health access, use, and outcomes,¹⁸ including increased HIV risk and inadequate HIV care.¹⁹ Rio de Janeiro state accounts for 10% of HIV cases nationwide, with 90% residing in the metropolitan area.² Among SGM, HIV prevalence was estimated at 15.3%³

and 31.2%²⁰ for MSM and TGW, respectively. Between 2009-2016, HIV prevalence among MSM aged 18-24 years increased from 4.4% to 13.3%.⁵

Different strategies may be used to reach and invite MSM and TGW to HIV prevention services, including web-based and venue-based recruitment. We aimed to describe the characteristics of MSM and TGW who attended a large HIV service in Rio de Janeiro, Brazil, according to different recruitment strategies or referrals. Additionally, we describe HIV prevalence and, PEP uptake and PrEP cascade.

Methods

Study design

This cross-sectional study included cisgender MSM and TGW who attended the largest HIV prevention service in Rio de Janeiro metropolitan area, located at the Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz (INI-Fiocruz) from Mar-2018 to Oct-2019. This study was approved by the INI-Fiocruz institutional review board (#CAAE 26095519.1.0000.5262).

HIV prevention service

The INI-Fiocruz HIV prevention service is located in Manguinhos, a low-income neighborhood located 10km from Rio de Janeiro downtown, at the northern part of the city. This service is part of SUS and all procedures and visits are offered with no cost. Biomedical HIV prophylaxis (PrEP and PEP) as well as HIV testing and counseling are offered to individuals aged 18 years or older of all genders and sexual orientations. Clinic staff comprises people from sexual and gender minorities, including MSM and TGW, as part of the team. The service has gender-neutral spaces and supports LGBTQIA+ activities, such as art workshops, dance classes, and

legal assistance, aiming to create a supportive and welcoming environment, to facilitate the access and retention of the populations.²¹

Trained counselors provide HIV risk assessment and HIV pre-/post-test counselling and evaluate PEP and PrEP eligibility, both available on site. If eligible, individuals receive PEP or same-day PrEP.²² Individuals diagnosed with HIV infection are immediately linked to care *in loco* and receive treatment, according to the Brazilian guidelines.

Venue-based recruitment

Venue-based recruitment is systematically performed by the community engagement team, which is composed by cisgender MSM and TGW peer-educators. The team promotes information about the HIV prevention service at LGBTQI+ venues (bars, nightclubs, parties, sauna and sex clubs), commercial sex hotspots, community-based organizations, nongovernmental organizations (NGOs), and large events (Carnival parade, Rio LGBTQI+ parade and music festivals). During these activities, the team distributes prevention material, including educational flyers about HIV prevention and sex education, condoms and lubs. Individuals reached and interested to attend to the HIV prevention service provide their contact information and are scheduled for a visit at the HIV prevention service.

Web-based recruitment

We promoted advertisements on geosocial networking application or GSN apps (Hornet and Grindr) and social media (Facebook and Instagram) to increase HIV and PrEP awareness and to encourage HIV testing. Online advertisements invited viewers to contact a peer educator (by phone number, email or WhatsApp) to receive information on scheduling a visit at the HIV prevention service.

Variables

We collected information on demographics of all MSM and TGW individuals who attended our service through semi-structured interviews. Variables were as following: age at the time of the visit (18 to 24; 25 to 35 and > 35 years); race (Black, *Pardo*/mixed and White); schooling (elementary [≤ 9 years], secondary [10-12 years] and pos-secondary [>12 years]). Based on the individuals' home address, we calculated the Human development index (HDI), later dichotomized into very high (≥ 0.800) vs. other (< 0.800).²³

HIV status was dichotomized in negative and positive according to HIV rapid test result. Any individual reporting condomless sex in the previous 72 hours was considered as eligible for PEP.²⁴ Individuals with at least one of the following criteria in the last 6 months were considered eligible for PrEP: (1) any condomless receptive anal sex, (2) sex with sexual partner living with HIV, (3) transactional sex (in exchange of money, goods, benefits, among others), and (4) history of sexually transmitted infection (STI).²² PrEP uptake was defined as the number of participants who initiated PrEP divided by the number of those deemed eligible.²⁵

Our main outcome was referral source to the HIV prevention service with potential options: (1) web-based recruitment; (2) venue-based recruitment; (3) peer-referral (except peers that are members of the community engagement team); (4) self-referral (not reached by web-based and venue-based recruitment); and (5) health professional's referrals.

Statistical analysis

First, we characterized MSM and TGW attending the HIV prevention service (overall and according to referral source). Categories of referral source were grouped based on absolute

numbers. For MSM, these were web-based, venue-based, peer-referral and other (self-referral and health professional's referrals). For TGW, categories were venue-based, peer-referral and other (web-based, self-referral and health professional's referrals). Comparisons between the different sources of referral used Chi-square test, Fisher's exact test and Kruskal-Wallis test as appropriate. Finally, we described PrEP cascade of HIV-negative MSM and TGW separately. All analyses were conducted in R Studio, using R version 4.0.3 (r-project.com).

Results

From March 2018 to October 2019, a total of 2713 individuals attended the HIV prevention service: 2246 (82.8%) MSM and 467 (17.2%) TGW. Median age was 27 years [interquartile range (IQR):23-34], 64.8% self-identified as Black or *Pardo*/mixed, 49.2% completed secondary school, and 57.9% lived in very high HDI neighborhood. Compared to MSM, TGW were younger, more frequently self-reported as Black or *Pardo*/mixed, completed elementary schooling level, and more commonly lived in neighborhoods with lower HDI (Table 1).

Overall HIV prevalence was 12.2% [95% confidence interval (CI): 11.0-13.5], higher among TGW [19.3% (95%CI): 15.9-23.1] than MSM [10.7% (95%CI): 9.5-12.1]. PrEP cascade among both groups is depicted on Figure 1. Among HIV-negative participants, 74.6% (1496/2005) of MSM and 82.8% (312/377) of TGW were eligible for PrEP. PrEP uptake was 56.4% (844/1496) and 39.1% (122/312) among MSM and TGW, respectively. The proportion of HIV-negative individuals who initiated PEP was 12.3% (335/2713); 15.3% (307/2246) among MSM and 7.4% (28/467) among TGW.

The main referral source to the HIV prevention service was peer-referral (43.6%), followed by web-based recruitment (24.1%), venue-based recruitment (16.2%), self-referral (14.7%) and

health professional's referral (1.4%) (Table 1). Online recruitment was more common among MSM (28.9%; 649/2246), compared to TGW (0.9%; 4/467). MSM and TGW had similar recruitment proportions using venue-based strategies. Peer-referral was more common among TGW than MSM (64.9% vs. 38.2%, respectively).

Among MSM, younger (18-24 years) and Black individuals were most commonly referred from venue-based recruitment (Table 2). In contrast, web-based strategies more commonly recruited MSM with higher education (post-secondary level) and living in very high HDI neighborhoods. Peer-referral recruited a higher proportion of MSM with lower education (elementary level). The venue-based strategy recruited a higher proportion of individuals who tested HIV positive at the service and those at high-risk behavior measured by PrEP eligibility among HIV-negative individuals. Nevertheless, PrEP uptake was similar in venue-based and web-based recruitments. PEP initiation was much more pronounced among MSM self-referred or referred by health professionals to the service.

Among TGW, venue-based recruitment more frequently recruited younger individuals (18-24 years) than other referrals (Table 3). Conversely, peer-referral recruited a higher proportion of TGW with lower education (elementary level) and with an HIV positive test at the service. PEP initiation and PrEP eligibility did not differ across referral sources. PrEP uptake was higher among TGW recruited by venue-based strategy.

Discussion

This study presents how different referral sources perform to recruit MSM and TGW and describes the characteristics of individuals recruited by those strategies attending a large HIV prevention service in Rio de Janeiro, Brazil. Venue-based recruitment and peer-referral were

more useful for most vulnerable MSM and TGW, as well as web-based strategies more often recruits MSM with higher income and education and performs poorly for TGW. These data indicate that combining different referral sources may reach MSM and TGW with different demographics and socioeconomic status. This combination could be useful to tailor recruitment strategies focusing on sexual and gender minorities for HIV prevention services in concentrated epidemics.

Despite of the large access to internet and increase use of apps, peer referral remains the most effective strategy to recruit and reach MSM and TGW, notably the latter group. This highlights the importance of community networks among sexual and gender minorities populations, especially among the most disadvantaged. Our HIV prevention service has created a welcoming, gender-neutral environment, which is utmost to engage those populations, who feel comfortable to invite their peers to the service. Brazil is a highly stigmatized, transphobic, and homophobic country,^{26,27} and these populations historically created social support networks among their peers to survive. The first demonstrations of LGBTQIA+ social started in 1960s, and became stronger during the re-democratization period in the 1980s.²⁸ In early 1990s, Brazil started its pioneering community and governmental response to HIV epidemic.²⁸ Although there were recent advances in civil rights, such as same sex civil marriage, and the acceptance of “outness” by part of the society, Brazil remains one of top countries in sexual and gender minorities murders worldwide, mostly TGW.^{26,27} On the contrary, the conservative tide currently underway in Brazil has worsened human rights violations, including LGBTQIA+.²⁹

Web-based recruitment successfully reached MSM, but not TGW. In a recent web-based study conducted in Brazil recruiting sexual and gender minorities in geosocial networking applications (GSN) apps, only 0.8% self-identified as TGW.³⁰ TGW are extremely

marginalized in Brazil. Previous Brazilian studies identified a substantial proportion of TGW with low education level and income, high physical and sexual violence rates, and frequent engagement in sex work.^{20,21,31} This context of profound social exclusion³² impact their access to mobile phones and internet connection. Moreover, TGW experiencing previous transphobia in the Brazilian public health system have reduced willingness to seek health care,^{33,34} which may lead to mistrust in health institutions and jeopardize digital campaigns promoted by these institutions.

Young, Black and high-risk MSM were more frequently recruited through venue-based strategies than other referral sources. Recent data has shown an increasing HIV prevalence among young and black MSM in Brazil.^{2,5} Therefore, it is of utmost importance to design strategies to reach those populations. Establishing a highly active community engagement team, whose members have different genders, ages and races is key for the success of venue-based recruitment. Although web-based strategies recruited more privileged MSM, who reported higher-education and living in very high HDI neighborhoods, these strategies could still be useful to recruit the most vulnerable people. Brazil has a large number of internet users in all social strata and 84% of Brazilians have a mobile phone.^{35,36} Alternative approaches could expand the range of web-based recruitment, such as using other apps more frequently used by specific groups (e.g. TikTok for younger MSM), engaging young and Black MSM in the conception and development of digital campaigns, use of appropriate language, and having digital influencers who could better communicate with these groups than health care professionals.

Younger and higher educated TGW were more frequently recruited through venue-based strategies than other referrals. Younger TGW more frequently attend nightclubs, parties and

commercial sex hotspots, and are usually more open to interact with the community engagement team. Those with higher education reached by the team may be more prompt to seek health care than those with lower education, who may be in higher social vulnerability and may not trust health care services. Although these findings may seem frustrating, they point to an important chain of HIV prevention education and engagement in care among TGW community. TGW recruited on venues who reach the service may later invite her peers who were not so comfortable to attend the service at once. Then, if these TGW feel welcomed at the service, they will invite other peers, and eventually the most vulnerable ones. This reinforces the importance of establishing a welcoming and gender-affirming health service.

Although lower than previous estimates,^{3,20} HIV prevalence in our study was high for both MSM and TGW. PrEP eligibility was also high, indicating that the referral sources successfully reached high-risk MSM and TGW. The proportion of MSM eligible for PrEP was similar to the observed in a large web-based survey including 11,367 Brazilian MSM.³⁷ In addition, PrEP uptake was in accordance with previous findings observed in a PrEP demonstration study conducted in two Brazilian cities.³⁸ Among TGW, PrEP eligibility and uptake were similar to a trans-specific PrEP study in Rio de Janeiro, Brazil.³⁹ One of the barriers to PrEP among TGW is the ability to adhere to a daily PrEP regimen.³⁴ New technologies for PrEP under development, such as long-acting and once monthly oral pill, may contribute to overcome this barrier for HIV prevention among TGW.⁴⁰

This study has several limitations. Referral sources and the information used to evaluate PrEP/PEP eligibility were self-reported, thus introducing the possibility of recall, response, or social desirability bias. Participants reported sexual behavior during risk assessment for PrEP/PEP evaluation. However, sexual behavior data has not been systematically collected

preventing further analyses. Nevertheless, our results add data that could contribute to reach and engage key-populations.

Conclusion

Multiple strategies are necessary to reach diverse MSM and TGW populations. Web-based strategies and venue-based strategies are complementary to reach high risk MSM, although they do not seem the most useful strategies among TGW. A strong partnership with trans communities and the establishment of a gender-affirming setting led to successful recruitment of young and vulnerable TGW. Venue based recruitment allows reaching and promoting HIV prevention among the most vulnerable individuals and communities. Inclusion of peers is of utmost importance to reach and recruit sexual and gender minorities.

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Table 1. Characteristics of cis-MSM and TGW attending the HIV prevention service.

Rio de Janeiro, 2019.

	Total	MSM	TGW
N(%)	2713	2246	467
Referral source/recruitment			
Web-based recruitment	653 (24.1)	649 (28.9)	4 (0.9)
Venue-based recruitment	439 (16.2)	368 (16.4)	71 (15.2)
Peer-referral	1183 (43.6)	880 (38.2)	303 (64.9)
Self-referral	400 (14.7)	322 (14.3)	78 (16.7)
Health professional's referral	38 (1.4)	27 (1.2)	11 (2.4)
Age (years)			
Median (IQR)	27 (23-34)	27 (22-34)	26(22-33)
18-24	908 (33.6)	732 (32.7)	176 (37.9)
25-35	1239 (45.9)	1041 (46.6)	198 (42.7)
>35	553 (20.5)	463 (20.7)	90 (19.4)
Race			
White	921 (35.2)	796 (36.8)	125 (27.4)
Black	698 (26.6)	565 (26.1)	133 (29.2)
<i>Pardo</i>	1001 (38.2)	803 (37.1)	198 (43.4)
Schooling			
Elementary	422 (15.9)	198 (9.0)	224 (48.9)
Secondary	1305 (49.2)	1097 (50.0)	208 (45.4)
Pos-secondary	924 (34.9)	898 (40.9)	26 (5.7)
HDI			
Very high	1570 (57.9)	1315 (58.6)	255 (54.6)
Other	1142 (42.1)	930 (41.4)	212 (45.4)
HIV testing			
Negative	2387 (87.8)	2005 (89.3)	377 (80.7)
Positive	331 (12.2)	241 (10.7)	90 (19.3)

MSM: men who have sex with men, IQR: interquartile range, HDI: Human development index.

Table 2. Characteristics of MSM attending HIV prevention service according to referral source. Rio de Janeiro, 2019.

	Total	Web-based	Venue-based	Peer-referral	Other ¹	P-value
N(%)	2246	649 (28.9%)	368 (16.4%)	880 (39.2%)	349 (15.5%)	
Age (years)						
Median (IQR)	27 (22-34)	28 (24-25)	26 (23-33)	27 (23-34)	28 (24-34)	<.001
18-24	732 (32.7)	187 (28.9)	143 (39.0)	308 (35.3)	94 (26.9)	<.001
25-35	1041 (46.6)	312 (48.2)	161 (43.9)	390 (44.7)	178 (51.0)	
>35	463 (20.7)	148 (22.9)	63 (17.2)	175 (20)	77 (22.1)	
Race						<.001
White	796 (36.8)	246 (39.7)	111 (30.7)	304 (35.4)	135 (41.4)	
Black	565 (26.1)	129 (20.8)	136 (37.7)	225 (26.2)	75 (23.0)	
<i>Pardo</i>	803 (37.1)	244 (39.4)	114 (31.6)	329 (38.3)	116 (35.6)	
Schooling						<.001
Elementary	198 (9.0)	17 (2.7)	33 (9.1)	122 (14.1)	26 (7.9)	
Secondary	1097 (50.0)	280 (44.2)	190 (52.3)	469 (54.2)	158 (47.9)	
Pos-secondary	898 (40.9)	337 (53.2)	140 (38.6)	275 (31.8)	146 (44.2)	
HDI						0.018
Very high	1315 (58.6)	412 (63.6)	215 (58.4)	492 (55.9)	196 (56.2)	
Other	930 (41.4)	236 (36.4)	153 (41.6)	388 (44.1)	153 (43.8)	
HIV testing						<.001
Negative	2005 (89.3)	599 (92.3)	302 (82.1)	782 (88.9)	322 (92.3)	
Positive	241 (10.7)	50 (7.7)	66 (17.9)	98 (11.1)	27 (7.7)	
PEP initiation (n=2005)						<.001
Yes	307 (15.3)	49 (8.2)	27 (8.9)	102 (13.0)	129 (40.1)	
No	1698 (84.7)	550 (91.8)	275 (91.1)	680 (87.0)	193 (59.9)	
PrEP eligibility (n=2005)						<.001
Yes	1496 (74.6)	466 (77.8)	243 (80.5)	565 (72.3)	222 (68.9)	
No	509 (25.4)	133 (22.2)	59 (19.5)	217 (27.7)	100 (31.1)	
PrEP uptake (n=1496)						<.001
Yes	844 (56.4)	293 (62.9)	149 (61.3)	290 (51.3)	112 (50.5)	
No	652 (43.6)	173 (37.1)	94 (38.7)	275 (48.7)	110 (49.5)	

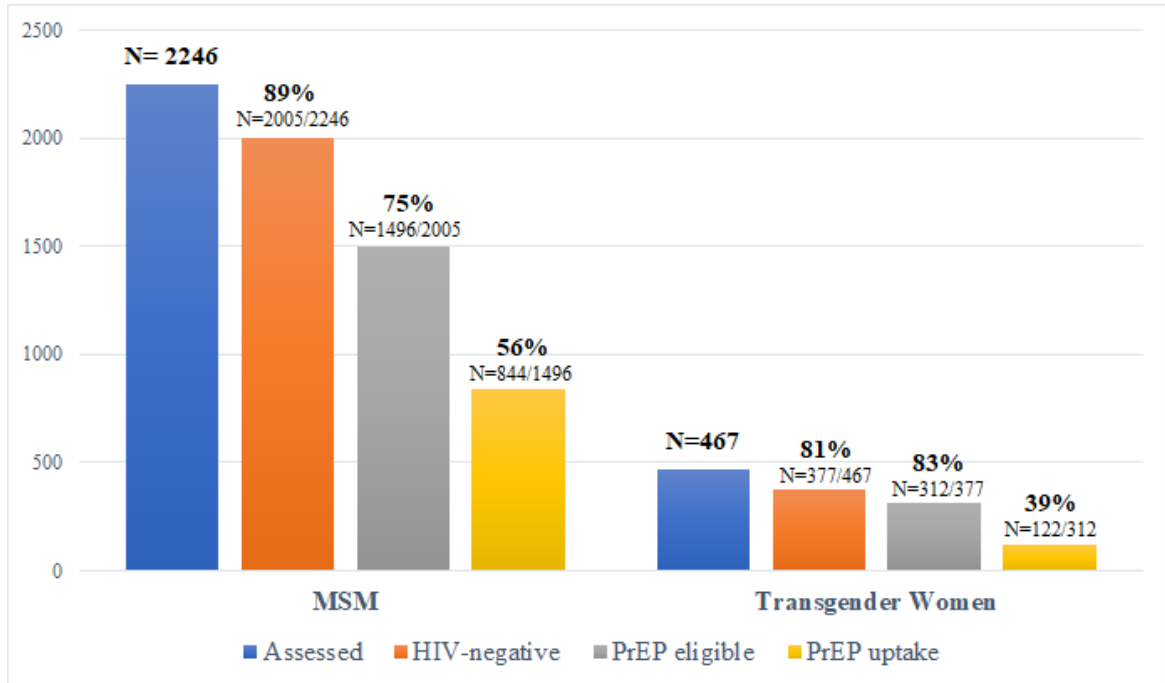
¹ Self-referral or health professional's referral. MSM: men who have sex with men, IQR: interquartile range, HDI: Human development index, PEP: post-exposure prophylaxis, PrEP: pre-exposure prophylaxis.

Table 3. Characteristics of TGW attending HIV prevention service according to referral source. Rio de Janeiro, 2019.

	Total	Venue-based	Peer-referral	Other ¹	p-value
N(%)	467	71 (15.2)	303 (64.9)	93 (19.9)	
Age (years)					
Median (IQR)	26(22-33)	23(21-29)	27 (22-34)	27(24-32)	0.007
18-24	176 (37.9)	38 (54.3)	111 (36.9)	27 (29.0)	0.006
25-35	198 (42.7)	22 (31.4)	125 (41.5)	51 (54.8)	
>35	90 (19.4)	10 (14.3)	65 (21.6)	15 (16.1)	
Race					0.63
White	125 (27.4)	16 (23.2)	82 (27.6)	27 (30.0)	
Black	133 (29.2)	24 (34.8)	81 (27.3)	28 (31.1)	
<i>Pardo</i>	198 (43.4)	29 (42.0)	134 (45.1)	35 (38.9)	
Schooling					<.001
Elementary	224 (48.9)	19 (26.8)	167 (56.2)	38 (42.2)	
Secondary	208 (45.4)	46 (64.8)	116 (39.1)	46 (51.1)	
Pos-secondary	26 (5.7)	6 (8.5)	14 (4.7)	6 (6.7)	
HDI					
Very high	255 (54.6)	39 (54.9)	163 (53.8)	53 (57.0)	0.86
Other	212 (45.4)	32 (45.1)	140 (46.2)	40 (43.0)	
HIV testing					
Negative	377 (80.7)	63 (88.7)	234 (77.2)	80 (86.0)	0.030
Positive	90 (19.3)	8 (11.3)	69 (22.8)	13 (14.0)	
PEP initiation (n=377)					0.14
Yes	28 (7.4)	3 (4.8)	15 (6.4)	10 (12.5)	
No	439 (94.0)	68 (95.8)	288 (95.0)	83 (89.2)	
PrEP eligibility (n=377)					0.40
Yes	312 (82.8)	50 (79.4)	192 (82.1)	70 (87.5)	
No	65 (17.2)	13 (20.6)	42 (17.9)	10 (12.5)	
PrEP uptake (n=312)					0.056
Yes	122 (39.1)	27 (54.0)	68 (35.4)	27 (38.6)	
No	190 (60.9)	23 (46.0)	124 (64.6)	43 (61.4)	

¹ Web-based recruitment, self-referral or health professional's referral. MSM: men who have sex with men, IQR: interquartile range, HDI: Human development index, PEP: post-exposure prophylaxis, PrEP: pre-exposure prophylaxis.

Figure 1. PrEP Cascade among cis-MSM and TGW who attended the HIV prevention service in Rio de Janeiro, Brazil, 2018-2019.



5.2. Artigo 2

Using web-based venues to recruit gay, bisexual and other men who have sex with men to a large HIV prevention service in Brazil

Abstract (448/450)

Background:

Internet and mobile phones are widely available in Brazil and could be used to disseminate information about HIV prevention. Cisgender gay, bisexual and other men who have sex with men (MSM) are disproportionately affected by HIV infection in Brazil. Although different web-based venues have been used to recruit MSM, there is no Brazilian data evaluating the characteristics of MSM recruited through these strategies and estimating their cost and yield in the country.

Objective:

We aimed to describe the web-based MSM recruitment cascade, to compare the characteristics of MSM recruited to a large HIV prevention service, and to estimate the cost per participant of each strategy in Rio de Janeiro, Brazil.

Methods:

We promoted advertisements on geosocial networking applications (GSN apps) (Hornet/Grindr) and social media (Facebook/Instagram) from March, 2018 to October, 2019. The advertisements invited viewers to contact a peer educator to schedule a visit at the HIV prevention service. The performance of the web-based recruitment cascade was based on how many MSM (1) were reached by the advertisement; (2) contacted the peer-educator; and (3)

attended the HIV prevention service. We used chi-square test to compare MSM recruited through GSN apps vs. social media. Estimated advertisement cost to recruit a participant were calculated by dividing the total advertisement costs by the number of participants who attended the service or initiated pre-exposure prophylaxis (PrEP).

Results:

The advertisement reached 1,477,344 individuals; 1270 MSM contacted the peer-educator (86.0 contacts per 100,000 views): 564(44.4%), 401(31.6%) and 305(24.0%) through social media, Grindr and Hornet. Among 1270 individuals who contacted the peer-educator, 36.3% attended the HIV prevention service with similar proportion for each online strategy (social media: 36.0% [203/564], Grindr: 37.9% [152/401], Hornet: 35.1% [107/305]). MSM recruited through GSN apps were older (mean age 30 years vs. 26 years; $p < .001$), more frequently self-reported White race (44.9% vs. 32.5%; $p = 0.027$) and higher schooling level (pos-secondary: 61.8% vs. 48.5%; $p = 0.007$) when compared to MSM recruited through social media. GSN apps recruited MSM with higher HIV risk as measured by PrEP eligibility (86.6% vs. 71.9%; $p < .001$) than social media, but there was no difference on PrEP uptake between the two strategies ($p = 0.22$). The estimated advertisement costs per participant attending the HIV prevention service were US\$28.36 for GSN apps and US\$12.17 for social media. The estimated advertisement costs per participant engaging on PrEP were US\$58.77 for GSN apps and US\$27.75 for social media.

Conclusions:

Social media and GSN apps advertisements were useful to disseminate information on HIV prevention strategies and to recruit MSM to a large HIV prevention service in Brazil. Compared to GSN apps, social media advertisements were less expensive and reached more vulnerable

and younger MSM. Digital marketing campaigns should use different and complementary web-based venues to reach a plurality of MSM.

Keywords: Social media; web-based recruitment strategies; PrEP; HIV prevention; Brazil; Latin America

Background

Cisgender gay, bisexual and other men who have sex with men (MSM) are disproportionately affected by HIV infection in Brazil (LUZ; VELOSO; GRINSZTEJN, 2019), with HIV prevalence estimated at 18.4% (KERR et al., 2018a). Recent data points to increase prevalence of HIV among young MSM (aged 18-24 years) (COELHO et al., 2021b). Since 2017, Brazil has been offering oral preexposure prophylaxis (PrEP) at no cost to individuals at risk, including MSM (WORLD HEALTH ORGANIZATION (WHO), [s.d.]). However, increasing awareness of PrEP and other prevention strategies among most vulnerable MSM, including young and those with lower income, remains a challenge (TORRES et al., 2019d).

Internet and mobile phones are widely available in Brazil and could be used to disseminate information about HIV prevention services. Despite large inequalities, Brazil has a large number of internet users in all social strata: 58% of individuals receiving one minimum wage per month (~US\$260.00) have access to the internet (COMITÊ GESTOR DA INTERNET NO BRASIL (CGIBR), 2019). Brazilian data estimates that 84% of the population have a mobile phone, and 96% have access to internet/apps via mobile phones (COMITÊ GESTOR DA INTERNET NO BRASIL (CGIBR), 2020).

Social media and geosocial networking (GSN) applications (apps) for sexual encounters (e.g. Grindr, Hornet, Scruff) are popular among MSM in Brazil (TORRES et al., 2018b, 2019b, 2019d, 2021). A meta-analysis including 25 studies conducted in Australia, China, India, Thailand and United States identified that app-users may have higher prevalence of sexually transmitted infections (STIs) than non-users (WANG et al., 2018b). In a web-based survey enrolling 11,367 Brazilian MSM, 93% reported using apps to seek sex partners, 54% of them with daily use. Willingness to use PrEP was similar among different sources of web-based

recruitment, including GSN apps (Grindr and Hornet) and social media (Facebook and Instagram) (TORRES et al., 2019b).

Although different web-based venues have been used to recruit MSM, there is no Brazilian data evaluating the characteristics of MSM recruited through these strategies and estimating their cost and yield in the country. We aimed (1) to describe the web-based MSM recruitment cascade, (2) to compare the characteristics of MSM recruited to a large HIV prevention service according to different web-based venues, and (3) to estimate the cost per individuals of each strategy.

Methods

Study Design

We performed a digital marketing campaign targeting MSM from March 2018 to October 2019 using advertisements on GSN apps (Hornet and Grindr) and social media (Facebook and Instagram) to increase HIV knowledge, HIV testing and PrEP awareness. The Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz (INI-Fiocruz) team designed and implemented the campaign. The INI-Fiocruz has the largest HIV prevention service for adults (18 years or older) in Rio de Janeiro city and its metropolitan area, Brazil. The service is part of the Brazilian Public Health System (namely SUS) at no cost to the user. The advertisements had information about HIV prevention and invited viewers to contact a peer educator (via phone number, email, WhatsApp) to schedule a visit at the HIV prevention service for HIV risk assessment, testing and referral to PrEP or post-exposure prophylaxis (PEP). This study was reviewed and approved by the INI-Fiocruz institutional review board (#CAAE 26095519.1.0000.5262).

Variables

All MSM referred by the peer-educator who attended the HIV prevention service answered semi-structured interviews conducted by trained counselors. Co-variables were: age at the time of the visit (categorized in 18 to 24; 25 to 35 and > 35 years); race (Black, *Pardo* or mixed and White); schooling (elementary [≤ 9 years], secondary [10-12 years] and post-secondary [>12 years]) and Human development index (HDI), based on the individuals home address and dichotomized it in very high (≥ 0.800) vs. other (< 0.800) (“Rio HDI per neighborhoods”, [s.d.]).

HIV testing was offered to all individuals who attend the HIV prevention service. HIV status was dichotomized in negative and positive according to HIV rapid test result, performed according to Brazilian recommendations (BRASIL, MINISTÉRIO DA SAÚDE, 2016).

Counselors evaluated all HIV-negative MSM for PEP and PrEP eligibility based on Brazilian National Guidelines. Individuals reporting condomless sex in the previous 72 hours were referred for PEP (BRASIL, MINISTÉRIO DA SAÚDE, 2021). MSM with at least one of the following criteria in the last six months were eligible for PrEP: (1) condomless receptive anal sex, (2) sexual partner living with HIV, (3) sex work, and (4) having a STI (BRASIL, MINISTÉRIO DA SAÚDE, 2018). PrEP uptake was defined as the number of participants who initiated PrEP divided by the number of participants eligible for PrEP (HOAGLAND et al., 2017a).

Data Analysis

We evaluated the web-based recruitment cascade for Hornet, Grindr and social media based on the number of MSM who (1) viewed the advertisement; (2) contacted the peer-educator; and (3) attended the HIV prevention service. Conversion rate was calculated dividing the

number of MSM who contacted the peer-educator by those reached by advertisements. We used chi-square test to compare the characteristics of MSM recruited through dating apps (Hornet and Grindr) vs. social media (Facebook and Instagram). We estimated the advertisement costs (in US\$) to recruit one participant to HIV prevention service were calculated by dividing total advertisement costs by the number of individuals who attended the service (GSN apps vs. social media). Lastly, we used the same rationale to estimate the cost per individuals engaging on PrEP. All analyses were conducted in R Studio, using R version 4.0.3 (r-project.com).

Results

Our marketing campaign (all strategies combined) reached 1,477,344 individuals: 23.8% from Grindr, 45.7% from Hornet, and 30.5% from social media. Overall, 1270 MSM contacted the peer-educator (86.0 contacts per 100,000 views), with a higher conversion rate on social media (0.14%; 564/444,177) compared to Grindr (0.12%; 401/346,500) and Hornet (0.05%; 305/666,667). Among the 1270 MSM contacting the peer-educator, 564 (44.4%), 401 (31.6%) and 305 (24.0%) were recruited on social media, Grindr and Hornet, respectively.

Of all MSM who contacted the peer-educator (N=1270), 36.3% (462/1270) attended the HIV prevention service, with similar proportions for each online strategy (Grindr: 37.9% [152/401]; Hornet: 35.1% [107/305]; social media: 36.0% [203/564]).

MSM attending the HIV prevention service (N=462) had a median age of 28 years (interquartile range [IQR]: 23-34), mostly self-identified as Black or Pardo (60.8%), completed post-secondary schooling (56.0%), and lived in very high HDI neighborhood (65.3%). A total of 38 (8.2%) MSM tested positive for HIV. Among HIV negative MSM

(N=424), 340 (80.2%) were eligible for PrEP; PrEP uptake was 62.9%. Only 22 (5.2%) MSM were eligible for and initiated PEP.

Comparing MSM according to web-based recruitment, MSM recruited by GSN apps were older (mean age 30 years vs. 26 years; $p<.001$), reported White race (44.9% vs. 32.5%; $p=0.027$) and reported higher schooling level (pos-secondary: 61.8% vs. 48.5%; $p=0.007$) than MSM from social media. MSM from GSN apps reported higher HIV risk as measured by PrEP eligibility (86.6% vs. 71.9%; $p<.001$) than MSM from social media, but no difference on PrEP uptake was observed ($p=0.22$).

The estimated advertisement cost per participant attending the HIV prevention service was US\$ 28.36 for GSN apps and US\$ 12.17 for social media. The estimated advertisement cost per participant engaging in PrEP was US\$ 58.77 for GSN apps and US\$ 27.75 for social media.

Discussion

Principal Findings

Our digital marketing campaign on different web-based venues was effective in recruiting MSM for a large HIV prevention service in Brazil. We successfully reached and engaged diverse MSM with different ages and races and high PrEP eligibility. Nevertheless, MSM with lower education was the least accessed group, indicating that complementary recruitment strategies, such as those on LGBTQIA+ venues, may still be necessary to reach MSM at higher social vulnerability.

Social media recruited a larger proportion of young MSM, with lower income and schooling compared to GSN apps. This indicates the importance of using social media to recruit MSM for HIV prevention services and to promote prevention campaigns targeting young MSM at HIV risk in Rio de Janeiro, Brazil. In addition, social media were more cost-effective to recruit individuals to attend the HIV prevention service and to engage on PrEP. Facebook was the best cost-effective web-based venue to recruit MSM to a qualitative study in Seattle (IOTT et al., 2018b) and was effective to recruit Latino gay couples in a study conducted in New York (MARTINEZ et al., 2014b). These findings reinforce that social media, such as Facebook and Instagram, could be used as an alternative option to reach and engage MSM in other HIV prevention services in resource-constrained settings, such as Brazil.

Different from our findings, a study conducted in Philadelphia identified Grindr as the most effective strategy to recruit people for an HIV vaccine trial (BUCKINGHAM et al., 2017). Although PrEP uptake did not differ between individuals recruited by one of the strategies, GSN apps were more effective to recruit high-risk MSM, according to PrEP eligibility, compared to social media. As such, different web-based venues may be useful to recruit diverse MSM to HIV prevention services, especially for young MSM, as verified in previous studies conducted in the United States (BUCKINGHAM et al., 2017; FONTENOT et al., 2020).

Strengths

In addition to recruit for the HIV prevention service, our campaign aimed to increase PrEP awareness and this could not be measured in this study. Data from online surveys indicate an increase in PrEP awareness in Rio de Janeiro, Brazil, from 2016 to 2018 (TORRES et al., 2019e), and 2020 National data indicated that 87% of sexual and gender minorities recruited

on Hornet were aware of PrEP (TORRES et al., 2021). Moreover, HIV knowledge was associated with PrEP use among MSM eligible for PrEP in Brazil (BLAIR et al., 2021). Digital campaigns are of utmost importance to promote information on HIV prevention, including PrEP and other prevention technologies, among MSM. These results are particularly useful to develop public strategies and may contribute to designing campaigns to increase PrEP uptake in Brazil.

Limitations

This study considered only MSM reached by digital marketing campaign who contacted the peer-educator. The advertisements may have reached other MSM who attended the HIV prevention service without contacting the peer-educator or who attended other services in Rio de Janeiro, Brazil. Responses of web-based recruitment and PrEP/PEP eligibility were self-reported, thus introducing the possibility of recall, response, or social desirability bias. Participants reported sexual behavior during risk assessment for PrEP/PEP evaluation. However, data on sexual behavior practices has not been systematically collected preventing further associations between web-based recruitment and sexual practices (e.g., condomless receptive sex or transactional sex). This study helped to identify this issue, which was further modified to collect more detailed data on sexual behavior and other variables, such as substance use and previous STIs.

Conclusions

Social media and GSN apps advertisements were useful to disseminate information on HIV prevention strategies and to recruit MSM to an HIV prevention service in Brazil. Compared to GSN apps, social media advertisements were less expensive and reached more vulnerable and

younger MSM. Our findings indicated that digital marketing campaigns should use different and complementary digital venues to reach diverse MSM.

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Figure 1. Web-based cascade to recruit MSM for a large HIV prevention service at Rio de Janeiro, Brazil.

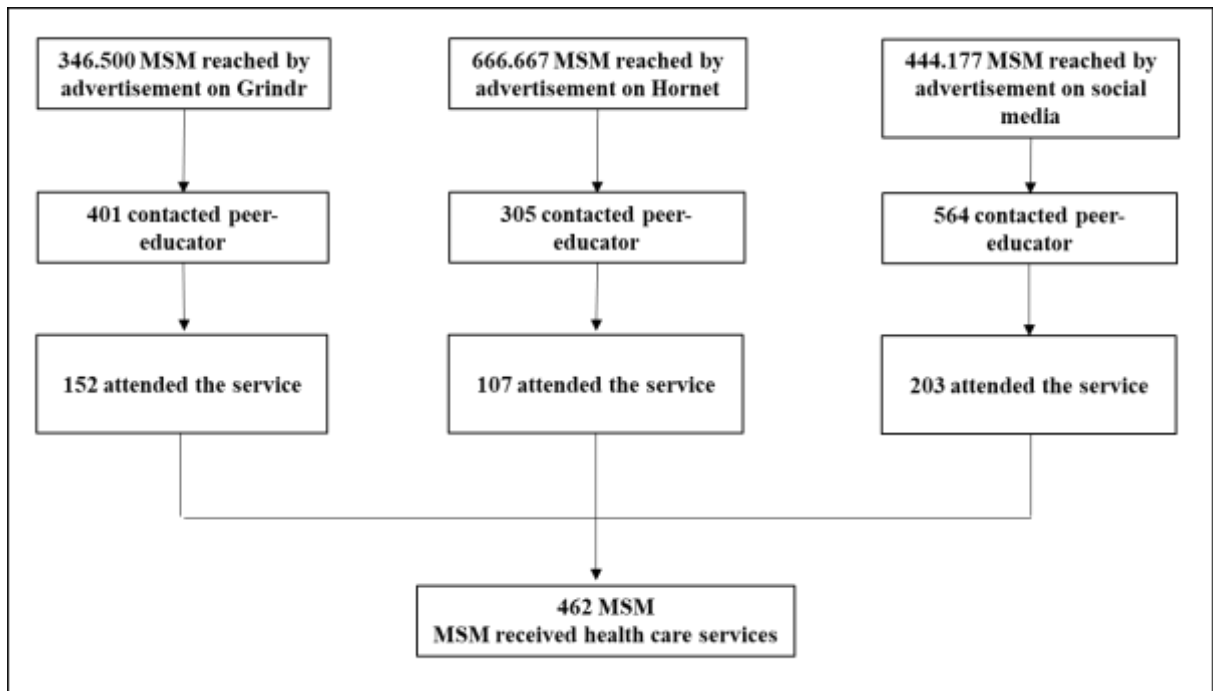


Table 1. Characteristics of MSM recruited to HIV prevention service according to web-based strategy (GSN apps vs. social media). Rio de Janeiro, 2019.

	Total N=462	GSN apps 259 (56.1%)	Social media 203 (43.9%)	p- value
Age (years)				
Median (IQR)	28 (23, 34)	30 (24, 37)	26 (23, 31)	<.001
18-24	146 (31.7)	66 (25.5)	80 (39.8)	<.001
25-35	210 (45.7)	116 (44.8)	94 (46.8)	
>35	104 (22.6)	77 (29.7)	27 (13.4)	
Race				0.027
White	173 (39.5)	111 (44.9)	62 (32.5)	
Black	87 (19.9)	43 (17.4)	44 (23.0)	
Pardo/Mixed	178 (40.6)	93 (37.7)	85 (44.5)	
Schooling				0.007
Elementary	10 (2.2)	7 (2.8)	3 (1.5)	
Secondary	187 (41.7)	90 (35.4)	97 (50)	
Pos-secondary	251 (56.0)	157 (61.8)	94 (48.5)	
HDI				0.57
Very high	301 (65.3)	172 (66.4)	129 (63.9)	
Other	160 (34.7)	87 (33.6)	73 (36.1)	
HIV status				0.657
Negative	424 (91.8)	239 (92.3)	185 (91.1)	
Positive	38 (8.2)	20 (7.7)	18 (8.9)	
PEP initiation (n=424)				0.54
Yes	22 (5.2)	11 (4.6)	11 (5.9)	
No	402 (94.8)	228 (95.4)	174 (94.1)	
PrEP eligibility (n=424)				<.001
Yes	340 (80.2)	207 (86.6)	133 (71.9)	
No	84 (19.8)	32 (13.4)	52 (28.1)	
PrEP uptake (n=340)				0.22
Yes	214 (62.9)	125 (60.4)	89 (66.9)	
No	126 (37.1)	82 (39.6)	44 (33.1)	

6. Conclusões

Diferentes estratégias de recrutamento combinadas são necessárias para acessar população LGBTQIA+ em sua pluralidade.

Anúncios em mídias sociais e aplicativos GSN foram úteis para disseminar informações sobre estratégias de prevenção do HIV e recrutar HSH para um serviço de prevenção do HIV no Brasil. Contudo, estratégias online não funcionaram para atingir a população de travestis e mulheres trans.

Estratégias de recrutamento online e *in loco* foram complementares para alcançar HSH de alto risco. Enquanto as estratégias online alcançaram mais HSH com maior risco de HIV, as estratégias *in loco* alcançaram HSH mais jovens, não brancos e com baixo nível educacional.

As propagandas vinculadas em mídias sociais foram mais baratas e atingiram os HSH mais vulneráveis e mais jovens, frente às propagandas em apps. Nossos resultados indicaram que as campanhas de marketing digital devem usar locais digitais diferentes e complementares para alcançar uma pluralidade de HSH.

Parcerias com comunidades trans e o acolhimento através de um ambiente de afirmação de gênero levou ao recrutamento bem-sucedido de travestis e mulheres trans jovens e vulneráveis para serviços de prevenção e cuidados e projetos de pesquisa. A indicação através de pares é de extrema importância, já que o uso de mídias sociais ainda não se mostrou uma estratégia útil para recrutar essa população.

Os produtos desse trabalho foram importantes para indicar falhas na captação de dados da população analisada, fato que levou a reestruturação e implementação dessa nova abordagem em no Serviço de Prevenção do HIV do INI-Fiocruz, com a possibilidade de expansão da estratégia para outros serviços de referência no país.

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ANEXO 1

Aprovação do CEP INI-Fiocruz

INSTITUTO NACIONAL DE
INFECTOLOGIA EVANDRO
CHAGAS - INI / FIOCRUZ



PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: AVALIAÇÃO DAS ESTRATÉGIAS DE RECRUTAMENTO DE GAYS, BISSEXUAIS E OUTROS HOMENS QUE FAZEM SEXO COM HOMENS (HSH), TRAVESTIS E MULHERES TRANS QUE FAZEM SEXO COM HOMENS PARA PREVENÇÃO COMBINADA DO HIV

Pesquisador: Sandra Wagner Cardoso

Área Temática:

Versão: 2

CAAE: 26095519.1.0000.5262

Instituição Proponente: INSTITUTO NACIONAL DE INFECTOLOGIA EVANDRO CHAGAS - INI/FIOCRUZ

Patrocinador Principal: Financiamento Próprio
INSTITUTO NACIONAL DE INFECTOLOGIA EVANDRO CHAGAS - INI/FIOCRUZ

DADOS DO PARECER

Número do Parecer: 3.845.157

Apresentação do Projeto:

Projeto retrospectivo - AVALIAÇÃO DAS ESTRATÉGIAS DE RECRUTAMENTO DE GAYS, BISSEXUAIS E OUTROS HOMENS QUE FAZEM SEXO COM HOMENS (HSH), TRAVESTIS E MULHERES TRANS QUE FAZEM SEXO COM HOMENS PARA PREVENÇÃO COMBINADA DO HIV, coordenado pela Dra Sandra Wagner.

Objetivo da Pesquisa:

Objetivo Geral - avaliar o impacto das estratégias de recrutamento de voluntários HSH, travestis e mulheres trans que fazem sexo com homens para avaliação de risco, testagem de HIV e acesso a prevenção combinada do HIV empregadas no LapClin-AIDS do INI-Fiocruz.

Objetivos Secundários

- 1-Descrever a cascata de recrutamento online e in loco desde o início das ações e campanhas, até a inclusão nos estudos e projetos de prevenção;
- 2- Descrever o perfil sociodemográfico das travestis e mulheres trans recrutadas in loco;
- 3- Comparar o perfil sociodemográfico dos HSH recrutados pelos métodos online e in loco;

Endereço: Avenida Brasil 4365

Bairro: Manguinhos

UF: RJ

Município: RIO DE JANEIRO

CEP: 21.040-360

Telefone: (21)3865-9585

E-mail: oep@ini.fiocruz.br

Continuação do Parecer: 3.845.157

- 4- Identificar o perfil das pessoas elegíveis para os estudos e projetos de prevenção.
- 5- Mensurar o custo por voluntário incluído nos estudos ou projetos de prevenção, considerando os valores gastos com as ações online e in loco.

Avaliação dos Riscos e Benefícios:

O estudo somente será iniciado após aprovação deste projeto pelo Comitê de Ética em Pesquisa com Seres Humanos do Instituto de Pesquisa Clínica Evandro Chagas (CEP/INI).

Os riscos desse estudo são mínimos, relacionados a quebra de confidencialidade. Eles serão minimizados com compromisso dos pesquisadores de manter o sigilo da informação.

Será solicitada a dispensa de termo de consentimento livre e esclarecido, por se tratar de estudo retrospectivo. Um termo de compromisso de confidencialidade será assinado pelo pesquisador.

Os resultados analisados neste trabalho serão divulgados em comunicações científicas e para a comunidade, mantendo o anonimato dos participantes, e o material não poderá ser empregado em outras pesquisas.

Benefícios:

Como benefício, espera-se que os resultados desse estudo tragam conhecimento e informação para a população de HSH e de pessoas trans,

veiculando artigo nas redes sociais e sites dos projetos. Além disso, tem o objetivo de identificar as melhores maneiras de alcançar as populações

mais vulneráveis, aumentando a testagem e acesso a prevenção combinada.

Comentários e Considerações sobre a Pesquisa:

Pesquisa relevante e esta avaliação refere-se a Resposta as pendencias do Projeto retrospectivo - AVALIAÇÃO DAS ESTRATÉGIAS DE RECRUTAMENTO DE GAYS, BISSEXUAIS E OUTROS HOMENS QUE FAZEM SEXO COM HOMENS (HSH), TRAVESTIS E MULHERES TRANS QUE FAZEM SEXO COM HOMENS PARA PREVENÇÃO COMBINADA DO HIV, coordenado pela Dra Sandra Wagner.

Considerações sobre os Termos de apresentação obrigatória:

Os termos de apresentação obrigatórias a seguir foram anexados a Plataforma Brasil:

Termo de compromisso e responsabilidade

Declaração de dispensa do TCLE

Declaração de não armazenamento de amostras biológicas

Endereço: Avenida Brasil 4365

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Continuação do Parecer: 3.845.157

e constam do PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_1462252.pdf

Recomendações:

Não há recomendações a serem realizadas

Conclusões ou Pendências e Lista de Inadequações:

Não há pendências a serem realizadas. A coordenadora cumpriu com as pendências relatadas durante a avaliação do projeto.

Considerações Finais a critério do CEP:

Este parecer foi elaborado baseado nos documentos abaixo relacionados:

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_1462252.pdf	03/02/2020 16:20:30		Aceito
Projeto Detalhado / Brochura Investigador	Projeto_Avaliacao_das_estrategias_de_recrutamento_final03022020.docx	03/02/2020 16:19:38	Sandra Wagner Cardoso	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_Avaliacao_das_estrategias_de_recrutamento_trackchange.docx	03/02/2020 16:19:09	Sandra Wagner Cardoso	Aceito
Outros	Termo_compromisso_responsabilidade.pdf	03/02/2020 16:03:27	Sandra Wagner Cardoso	Aceito
Outros	Declaracao_de_dispenza_TCLE.pdf	03/02/2020 16:02:32	Sandra Wagner Cardoso	Aceito
Outros	Declaracao_nao_armazenamento.pdf	03/02/2020 16:01:55	Sandra Wagner Cardoso	Aceito
Outros	carta_resposta_3767150.pdf	03/02/2020 16:00:13	Sandra Wagner Cardoso	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_Avaliacao_das_estrategias_de_recrutamento.docx	25/11/2019 16:17:38	Sandra Wagner Cardoso	Aceito
Folha de Rosto	folha_de_rosto.pdf	25/11/2019 16:11:34	Sandra Wagner Cardoso	Aceito

Situação do Parecer:

Aprovado

Necessita Apreciação da CONEP:

Não

Endereço: Avenida Brasil 4365

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Continuação do Parecer: 3.845.157

RIO DE JANEIRO, 18 de Fevereiro de 2020

Assinado por:
Mauro Brandão Carneiro
(Coordenador(a))

Endereço: Avenida Brasil 4365

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ANEXO 2

Abstract PEC0557: Online cascade of MSM recruitment to a large PrEP service in Rio de Janeiro, Brazil

phine who answered questions about PrEP and risk behaviors were included in the study. 2017 CDC criteria determined HIV risk. Gender differences were assessed by Pearson's χ^2 .

RESULTS: 137 of 162 participants met inclusion criteria (54.0% women, 46.0% men). The majority of the sample was Black (70.8%), unmarried (68.6%), and unemployed (51.8%). Nine men (14.3%) and 38 (51.4%) women reported same-sex contact. 73.7% (n=101) of the study population met CDC risk criteria based on past year behaviors: 95.0% reported inconsistent condom use, 21.0% engaged in commercial sex, 9.0% shared injection equipment, 8.9% reported a recent bacterial STI, and 4.0% had an HIV+ sexual partner. Of PrEP-indicated participants, 19.0% had heard of PrEP prior to the survey, and only 3 participants reported past year PrEP use. Risk factors and PrEP knowledge/uptake did not vary significantly by gender.

CONCLUSIONS: PrEP uptake in this study is significantly lower than both the general US PrEP prevalence and the CDC's goal of 50%, despite these patients being engaged in medical care and regular buprenorphine treatment. While many campaigns have targeted men who have sex with men and injection drug users in active use, PrEP outreach should also specifically target people with OUD by integrating HIV prevention into OUD treatment.

PEC0557

ONLINE CASCADE OF MSM RECRUITMENT TO A LARGE PREP SERVICE IN RIO DE JANEIRO, BRAZIL

DRB. Bezerra, T.S. Torres, L.E. Coelho, C. Jallé, E. Cavalcante, D. Waite, J.R. Grangeiro, T. Araújo, J. Freitas, C. Cerqueira, L. Monteiro, C. Oliveira, L. Karnel, N.M. Fernandes, S.W. Cardoso, B. Hoagland, V.G. Veloso, B. Grinsztejn
Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz, Rio de Janeiro, Brazil

BACKGROUND: Since 2017, Brazil has offered oral FTC/TDF PrEP to high-risk cis/trans men and women at no cost. However, increasing awareness of PrEP services within the young and low income MSM populations remains a challenge. Access to the internet and mobile phones is widely available in Brazil and can be utilized as tools for disseminating information to vulnerable MSM on HIV prevention and testing services. This study describes the online cascade of MSM recruitment to a PrEP service in Rio de Janeiro, Brazil.

METHODS: From Mar-2018 to Oct-2019, advertisements on GSN dating apps (Hornet and Grindr) and social media (Facebook/Instagram) targeting MSM were used to increase HIV and PrEP awareness and to encourage HIV testing. Advertisements included contact information (phone, email, WhatsApp) and invited viewers to contact a peer educator for information on scheduling a HIV risk assessment, testing and referral to PrEP. The success of the online recruitment cascade was assessed based on the number of MSM who:

- (1) viewed the advertisement;
- (2) contacted the peer-educator; and
- (3) received healthcare services.

Participant recruitment costs were calculated by dividing the total advertisement costs by the number of participants who received healthcare services. Comparisons according to the recruitment strategy (dating apps vs. social media) were made using chi-square test.

RESULTS: The online advertisements (all strategies combined) reached approximately 1,500,000 MSM, of those, 0.1% (1270/1,500,000) contacted the peer-educator and 36.3% (462/1270) received healthcare services. Of those who contacted the peer-educators, 44% were recruited using social media, 33% on Grindr and 23% on Hor-

net. When compared to dating apps, MSM recruited via social media were younger (median age 26 [IQR:23-31] vs. 30 [IQR:24-37] years-old, $p<0.001$), non-white (67% vs 55%, $p=0.008$) and were less educated (completed secondary school or less: 51% vs 38%, $p=0.005$). The estimated cost for announcements to recruit one participant (USD) were \$49.70 on Grindr, \$21.18 on Hornet and \$15.80 on Facebook/Instagram.

CONCLUSIONS: Social media and dating apps advertisements are an effective means to disseminate online HIV and PrEP information and recruit MSM to PrEP services. Social media advertisements were less expensive and reached more vulnerable MSM.

PEC0558

LOCATION, LOCATION, LOCATION: INCREASING UPTAKE OF HIV SERVICES AMONG KEY AND PRIORITY POPULATIONS IN SLUM SETTINGS: EXPERIENCES FROM TORORO DISTRICT, UGANDA

G. Mwanayo, B. Egessah, H. Nandudu, N. Matsiko, I. Mirembe, C. Meja, C. Karuta
IntraHealth International, Mbale, Uganda, IntraHealth International, Chapel Hill, United States

BACKGROUND: Pinpointing locations where HIV services are most likely to reach key populations (KPs) and priority populations such as truck drivers is key to linking these populations to HIV care and treatment and promoting adherence to treatment to reach viral suppression. In 2018, the USAID-funded Regional Health Integration to Enhance Services in Eastern Uganda (RHITES-E) Activity, led by IntraHealth International, in collaboration with the Ministry of Health worked with the District Health Team (DHT) in Tororo District, Uganda, to design a comprehensive KP service package including HIV testing and counseling, ART enrollment, STI screening and treatment, and family planning services.

DESCRIPTION: We conducted KP mapping to determine localization of service provision. Bison Health Center III was selected for being in an urban slum surrounded by bars, brew joints, and motels for traders on the Malaba Juba International Highway. From March 2018-March 2019, DHT worked with the health center to identify KP peers to mobilize and counsel the KP community. A retrospective observational cohort analysis using routine patient monitoring data was performed.

LESSONS LEARNED: Within 12 months, peers reached 879 individuals with HIV services. Of these, 75.5% were female sex workers, 10.7% were people who use drugs, 3% were people who inject drugs, 8.5% were truck drivers, and 2.2% were men who have sex with men. The sero-positivity rate was 11% (97/879). All clients were linked to Bison Health Center; 80.4% (78/97) received HIV care at the facility. Of 78 linked to care, 48.7% (38/78) were transferred out by a clinician, 23.7% (18/78) were self-referrals to other health facilities, and 28% (22/78) were lost-to-follow-up. By end of April 2019, only 24.4% (19/78) remained in care at the facility.

CONCLUSIONS/NEXT STEPS Findings indicate that localizing KP services in slums increases uptake of services and engaging peers in mobilization with support from a dedicated health facility team improves responsiveness to services for KPs. A considerable number of KPs do not reach places of referral for care and support and those effectively reached have a low retention rate. This calls for interventions to strengthen linkages, referrals, retention, and treatment outcomes for KPs.

ORAL
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ANEXO 3

Abstract PED1303: Online and venue-based recruitment strategies are complementary to reach high risk MSM for a large PrEP service in Rio de Janeiro, Brazil

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PED1303

ONLINE AND VENUE-BASED RECRUITMENT STRATEGIES ARE COMPLEMENTARY TO REACH HIGH RISK MSM FOR A LARGE PREP SERVICE IN RIO DE JANEIRO, BRAZIL

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BACKGROUND: New cases of HIV infections continue to increase among young MSM in Brazil. In order to mitigate the HIV epidemic, it is crucial to reach and engage young vulnerable MSM in PrEP services. This study compares online and venue-based strategies to recruit MSM to HIV prevention service in Rio de Janeiro, Brazil.

METHODS: MSM at high risk for HIV infection were recruited through venue-based and online strategies. Venue-based strategies consisted in peer educators recruitment in gay venues, referral by friends or health professionals and self-referral. Online strategies included advertisements on GSN dating apps (Hornet and Grindr) and social media (Facebook/Instagram) to increase PrEP and HIV awareness. We used chi-square test to compare the characteristics of MSM who attended the service through online and offline strategies.

RESULTS: From Mar-2018 to Oct-2019, 2246 MSM attended the service looking for HIV testing, HIV counseling and HIV prevention strategies (PrEP and PrEP): 649(28.9%) recruited online and 1597(71.1%) through venue-based strategies. MSM recruited online were older (age median 28)[IQR:24-35] vs. 27[IQR:23-34] years old, $p=0.041$, white (39.7% vs. 35.6%, $p=0.071$) and of higher education (53.2% vs. 36.0%, $p<0.001$) compared to MSM recruited through venue-based strategies. (Table). HIV prevalence was 10.7%(IQR:9.5-12.1%), higher among MSM recruited through venue-based strategies (12.0% vs. 7.7%, $p=0.03$). Among HIV-uninfected MSM, 74.6%(1496/2005) were eligible for PrEP, and the proportion was higher among MSM recruited online (77.8% vs. 73.3%, $p=0.033$). Among PrEP eligibles, PrEP uptake was 56.4% (844/1496), higher among those recruited online (62.9% vs. 53.5%, $p<0.001$). PrEP initiation was higher among MSM recruited offline (18.3% vs. 8.2%, $p<0.001$).

	Venue-based 1597(71.1)	Online 649(28.9)	Total 2246(100)	p-value	
Median age (years)	27 (IQR:23-34)	28 (IQR:24-35)	27 (IQR:23-34)	0.041	
Age (years)	15-24 25-34 ≥35	545(34.3) 729(45.9) 315(19.8)	187(28.9) 312(48.2) 149(22.9)	733(32.7) 1041(46.6) 463(20.7)	0.003
Race	White Non-white	550(35.6) 996(64.4)	246(38.7) 373(60.3)	796(36.8) 1368(63.2)	0.071
Education	≤ Secondary school > Secondary school	998(64.0) 561(36.0)	297(46.8) 337(53.2)	1295(59.1) 898(40.9)	<.001

[Table]

CONCLUSIONS: Online and venue-based strategies are complementary to reach high risk MSM. While online strategies reached more MSM at higher HIV risk, venue-based strategies reached younger, non-white and lower educated MSM.

PED1304

PEER NAVIGATION IS IMPORTANT TO IMPROVE CARE PRACTICES OF ADOLESCENTS MSM AND TGW WHO ARE TAKING PREP: LESSONS LEARNED FROM BRAZIL

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BACKGROUND: In many countries including Brazil, adolescent and youth men who have sex with men (MSM) and transgender women (TGW) (AYKP) are at high risk for HIV infection. PrEP is an effective HIV prevention tool in high-risk populations. However, there are still gaps in PrEP enrolment among adolescents. Our goal is to explore care practices of Peers Navigators (PN) with participants in PrEP1519 study.

METHODS: Data are from PrEP1519, the first demonstration study among AMSM and ATGW aged 15-19, ongoing in three Brazilian cities: Salvador, Belo Horizonte e São Paulo. Data was collected between April-July, 2019 in Salvador site. After PrEP initiation, a PN is assigned to follow-up the needs of each participant and reinforce PrEP adherence. Fifteen field notes describing PN interactions with the participants were reviewed, and main themes categorized. In addition, transcription of a focus group with three PN, and first author field observations analyzed.

RESULTS: PN highlighted the importance of their efforts to create a narrow bond between the project and participants; once their follow-up reduces participants' anxiety and fear of the repercussions of prolonged medication use. The LGBT belonging of PN and their emotional and operational support on PrEP use, facilitated the emergence of sensitive topics such as affective-sexual experiences, self-image, daily life experiences, and access to work. The navigation includes care and support on various aspects such as: use of PrEP and its difficulties (side effects, drug interaction - especially hormone use in TGW, forgetfulness, appropriate storage), sexual health care, combined prevention and the multidisciplinary care offered in the PrEP clinic, following-up them at public services in order to facilitate access to health and care, and social support to overcome TGW vulnerabilities (financial, family and emotional).

CONCLUSIONS: PN is an important bonding and retention strategy for AYKP, considering the various social vulnerabilities they face. The navigation has been developing as a holistic care process and beyond PrEP adherence maintenance. It has been molded and reformulated according to the needs of each participant.

PED1305

REDUCING ATTRITION AMONG PERSONS LIVING WITH HIV IN RESOURCE-POOR SETTINGS: LESSONS LEARNED IN A RETURN-TO-CARE CAMPAIGN IN RURAL HAITI

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BACKGROUND: Despite remarkable reductions in HIV prevalence and mortality in Haiti over the past decade, high rates of attrition remain a serious challenge in progress toward epidemic control. PEP-
 PAR estimates that almost half of the PLHIV newly enrolled in the

ANEXO 4

Abstract PED1308: Reaching and engaging transwomen: a successful recruitment cascade in an HIV prevention service in Rio de Janeiro, Brazil

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LESSONS LEARNED: After 3 months, 1124 individuals accessed our eligibility screener, 49 were eligible, and 14 participants have enrolled. Most eligibles came from paid online ads and participant registries, and primary reason for ineligibility was county of residence. Enrollment patterns and participant feedback suggest that the free HIV/STI tests motivate some to enroll, but the lack of monetary incentives lead to significant attrition. Additional barriers to enrollment include a limited recruitment budget, and lack of on-the-ground presence in the DTC counties. Our YMSM advisory council suggested offering coupon codes and sexual health products to compensate for lack of monetary incentives, and networking with LGBT social groups in each county to increase reach.

CONCLUSIONS/NEXT STEPS: DTC delivery of e-health HIV prevention interventions promises to reach YMSM more effectively than traditional in-person approaches, yet this has not been studied empirically. Our early challenges suggest that strategies effective in a research context may not be pragmatic in a real-world service implementation of KIU. Our team is brainstorming novel approaches to reaching, engaging, and retaining YMSM in KIU within project constraints.

PED1308 REACHING AND ENGAGING TRANSWOMEN: A SUCCESSFUL RECRUITMENT CASCADE IN AN HIV PREVENTION SERVICE IN RIO DE JANEIRO, BRAZIL

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BACKGROUND: Transwomen are disproportionately affected by HIV epidemic worldwide. However, stigma, social marginalization and transphobia hinder transwomen from accessing HIV prevention and care services. We describe the recruitment cascade among transwomen at a large research and care center for HIV prevention in Rio de Janeiro, Brazil.

METHODS: Since 2015, Fiocruz, a major public health institution in Brazil has implemented a transgender health clinic and has been developing HIV prevention and treatment studies for transwomen. Transwomen diagnosed with HIV infection are offered care and immediate ART initiation, and high-risk HIV negative transwomen are offered HIV prevention services including PrEP and PEP. Clinical care including mental health and endocrinology are offered at no cost. Trans community educators were hired, gender-neutral spaces were created, and support activities and services such as art workshops, dance classes, legal assistance were implemented. Peer referral, peer-educator outreach activities in trans venues and sex work hot spots, and social media campaigns are the main recruitment strategies. Information on demographics, HIV testing, and PrEP were collected by semi-structured interviews.

RESULTS: From Oct-2018 to Nov-2019, 467 transwomen were assessed. The majority were referred by peers (65%) and 15% by outreach activities performed by the trans community educators part of our team. Only 1% was referred by social media advertisements. Median age was 26 years (IQR:22-33), 73% were non-white, and 49% had elementary school or less. 90 transwomen were HIV-infected (19.3% prevalence; 95%CI:16.0-22.1). Among the 377 HIV-uninfected transwomen, 370 (98%) were eligible for PrEP according to CDC criteria, 349 (92.6%) were referred for PrEP, and PrEP uptake was 33.8%

(125/370); 21 had criteria for PEP use and initiated PEP in the same day. A hot line was made available for them to call if any adverse events or concerns about PrEP and PEP use.

CONCLUSIONS: A strong partnership with trans communities and the establishment of a gender-affirming setting led to successful recruitment of young and vulnerable transwomen for prevention and care services and research projects. Inclusion of peers is of utmost importance to reach and recruit transwomen. Use of social media has not proven yet as a useful strategy to recruit transwomen in our setting.

TRADITIONAL AND COMPLEMENTARY HEALTHCARE APPROACHES

PED1309 ENGAGING TRADITIONAL BIRTH ATTENDANTS FOR IMPROVED ACCESS TO PMTCT SERVICES BY PREGNANT WOMEN

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BACKGROUND: Prevention of mother-to-child transmission of HIV (PMTCT) programs in Nigeria faces challenges in achieving service uptake. One important reason is because of the significant preference for traditional birth attendants (TBAs) which have not routinely been included in national PMTCT programs. We examined the benefits of incorporating TBAs in PMTCT program.

METHODS: We conducted a retrospective review of PMTCT data in 128 facilities linked to 190 TBAs in three local government areas (LGAs) of Rivers State between January 2018 and March 2019. A 7-step TBA engagement intervention model was implemented: 1. Advocacy and stakeholder management; PMTCT gap analysis discussions were held with stakeholders. 2. Mapping of TBAs: We mapped TBAs around existing PMTCT health facilities. 3. Knowledge assessment and capacity building: A baseline knowledge assessment and capacity building on SOPs for HIV counselling and testing. 4. Roll out of PMTCT services by TBAs: HIV counselling, testing and documentation were supported with supply of commodities and technical assistance. 5. TBA-Health facilities Referral system: Each TBA was linked to PMTCT sites with protocols for referral and linkage services. 6. Performance based incentives: High performing TBAs were provided with incentives such as communication allowances and souvenirs for clients. 7. Monitoring and Evaluation: Documentation and reporting of testing, delivery, ARV prophylaxis and referral services.

RESULTS: 580 HIV positive pregnant women delivered their babies at the health facilities within the period of review, and 20.7% (120) were unbooked pregnant women referred from TBAs. Similarly, 463 HIV exposed infants received ARV prophylaxis within 72 hours of delivery, of which 11.0% (54) were HIV exposed infants delivered outside the health facilities but referred by the TBAs for EID and prophylaxis. Another 52 exposed infants received ARV prophylaxis after 72 hours, of which 65.4% (34) were from TBA referrals of HEIs delivered outside health facilities.

CONCLUSIONS: The involvement of TBAs in PMTCT reflects an opportunity to improve PMTCT outcomes. It can help bridge access gap between the communities and health facilities.