

Evaluating the impact of community COVID-19 testing programmes

“So, I think by coming here, it takes away the fear.”

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Executive Summary

Purpose of Project:

To evaluate the perceived impact of existing Lateral Flow testing via the Community Testing Delivery Channel on communities in Middlesbrough and Redcar and Cleveland.

Specifically in reference to the above over-arching purpose of the project, the evaluation was to answer the following questions:

1. **Who is accessing community testing facilities, and how can more people be engaged with the community testing programme?**
2. **How has the community testing programme affected the perception of front-line workers of the safety of their workplace regarding COVID-19?**
3. **Does community testing reduce COVID-19 transmission in ‘high-risk’ settings?**
4. **Can community testing support the recovery of the local area?**

Methods:

This evaluation consisted of analysis of data from Public Health and the Office of National Statistics (ONS) to ascertain whether or not an increase in Lateral Flow Testing (LFT) corresponded to a decrease in transmission of COVID-19 in Middlesbrough and Redcar and Cleveland.

In addition to the analysis of this data, purposive, semi-structured interviews were conducted with team leaders and staff from a range of community testing sites in both Middlesbrough and Redcar and Cleveland. The purpose of these interviews was to elicit qualitative data on the experiences of staff on the front line of the community testing programme which would both add to and go beyond the initial analysis of numerical and strategic-level information.

Recruitment:

Recruitment for the qualitative element of this study was achieved through Public Health (PH) and Middlesbrough Council (MC) and Redcar & Cleveland Borough Council (RCBC) contacts. Those who were willing to take part were made aware of the study and invited to contact the research team at Teesside University for more information. In total, 10 individuals took part in interviews (6 Community Testing Team Leaders, 2 Test Operatives, and 2 Workplace Testing Co-ordinators).

Analysis:

Pertaining to the above questions:

Uptake within communities of the testing programme has been mixed. A lack of engagement has been most apparent within BAME (Black, Asian and Minority Ethnic) and deprived communities. The reasons for this are mixed, and largely follow pre-existing issues surrounding health engagement in such communities. How to achieve greater engagement was discussed at length and a number of solutions to ameliorate the low level of engagement were suggested, some of which are reflected in the recommendations from this report.

Participation in the community testing programme as a member of the testing team almost uniformly increased confidence in mitigating the virulence of COVID-19, and decreased anxiety and

fear concerning contracting the virus. However, this confidence was highly conditional on the continued implementation of control measures designed to curb the spread of the virus – namely suitable PPE, close management of the numbers of individuals admitted to testing sites at any one time, and adherence to social distancing rules.

Whether or not community testing has corresponded to a decrease in COVID-19 transmission in high-risk settings is an incredibly complex question. The repeated repeal and reinforcement of measures over the course of the evaluation, as well as mixed information on a national level have created an environment where external factors that cannot be controlled have impacted infection rates and risk perceptions to such an extent that it is simply impossible to assess what tangible impact the introduction of community testing programmes have had on transmission of COVID-19.

However, even with the difficulties ascertaining the specific causal relationships between fluctuating infection rates at a local level and the introduction of community testing programmes, it can still be said with some degree of confidence that there is a place within the COVID-19 recovery effort for community testing. The evidence for this is in the testimony of the individuals who took part in delivering the programme, and those who were closely involved with the programme. These individuals spoke of a noteworthy impact upon the health and wellbeing of individuals who engaged with the programme – not least upon their mental health.

Recommendations:

If community testing programmes are to contribute to the recovery of the local area from the harms of the pandemic, then the following measures are recommended:

Continued participation in testing is an important part of COVID-19 recovery. More needs to be done to highlight the benefits of testing.

Engagement with ‘hard-to-reach’ populations can be improved. This may be achieved via a peripatetic (travelling across different sites) approach to testing, improving trust and access amongst these groups.

Although workplace safety for testing operatives has been excellent, more understanding may need to be gained of front-line staff in other sectors, and how to manage the risk posed by clients, customers and service users in the future.

Achieving the required levels of data needed to access testing has been a reported issue affecting engagement. The possibility of reducing the amount of data requested as part of the testing procedure may improve this.

Although home testing does much to navigate issues surrounding engagement, the potential for decreased reliability and accuracy of test results must be taken into account when considering this option.

Motivations for testing are varied. More understanding of these motivations is needed in order to assure continued adherence regarding all aspects of COVID-19 guidance.

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Specifically in reference to the above over-arching purpose of the project, the evaluation was to answer the following questions:

1. *Who is accessing community testing facilities, and how can more people be engaged with the community testing programme?*
2. *How has the community testing programme affected the perception of front-line workers of the safety of their workplace regarding COVID-19?*
3. *Does community testing reduce COVID-19 transmission in 'high-risk' settings?*
4. *Can community testing support the recovery of the local area?*

To fulfil the project aims, the research methods included secondary analysis of data from Public Health and the Office of National Statistics (ONS) to ascertain whether an increase in Lateral Flow Testing (LFT) corresponded to a decrease in transmission of COVID-19 in Middlesbrough and Redcar and Cleveland. Additionally, purposive, semi-structured interviews were conducted with team leaders and staff from a range of community testing sites in both Middlesbrough and Redcar and Cleveland.

Background

The local area

Most areas with highest infection rates are in North-East (NE) England. The health of people in Middlesbrough is generally worse than the national average with 32% of children living in the most deprived areas¹. Deprivation leads to a higher risk of exposure to the virus and the underlying poorer health of the population which increases susceptibility to infection and the risk of succumbing to the illness. This population also have had less opportunity to work from home during the pandemic, more overcrowded housing and are less able to afford to self-isolate.

In Middlesbrough, life expectancy is 12.6 years lower for men and 12.0 years lower for women in the most deprived areas of Middlesbrough when compared to those in the least deprived areas². Middlesbrough has significant social and economic issues which contribute to inequalities. Systemic problems lie at the heart of these inequalities and need a long-term systemic response to support people to value their health and wellbeing.

Middlesbrough's health inequalities are compounded by data which demonstrates that healthy life expectancy is almost 19 years lower in the most deprived areas of the UK compared with the least deprived. Furthermore, COVID-19 mortality rates for people younger than 65 were 3.7 times higher

¹ Public Health England (2019). Local Authority Profile: Middlesbrough: London [Available from: <https://fingertips.phe.org.uk/static-reports/health-profiles/2019/e06000002.html?area-name=middlesbrough>.]

² Public Health England (2019). Local Authority Profile: Redcar & Cleveland: London [Available from: <https://fingertips.phe.org.uk/static-reports/health-profiles/2019/e06000003.html?area-name=redcar%20and%20cleveland>.]

in the most deprived areas than the least deprived areas in England between March 2020 and March 2021.³

Lateral Flow Tests

Lateral Flow Tests (LFTs) are similar to Polymerase Chain Reaction (PCR tests). Both are types of antigen test, designed to pick up active COVID-19 infection rather than antibodies to the disease. With a COVID-19 LFT, a nasopharyngeal sample is placed on a small absorbent pad, which is then drawn along the pad via a capillary line to a strip coated in antibodies, which bind to SARS-Cov-2 proteins. If these proteins are present, this will show as a coloured line on the test, indicating infection. LFTs have one distinct advantage over PCRs as they do not need to be sent away for processing at a laboratory, with results returning within 15 to 30 minutes. However, what they gain in speed they lose in accuracy.

A systematic review of 64 studies from Europe and the US found that LFTs were far better at identifying COVID-19 in people who had symptoms rather than in asymptomatic cases⁴. LFT sensitivity in symptomatic people ranged from 34% to 88%, with an average accuracy of 72%. In people without symptoms the LFTs correctly identified an average of 58% of those who were infected.

While the use of LFTs for mass asymptomatic screening has been encouraged in the UK, some experts have cast doubt on how useful such COVID-19 tests really are in this context.⁵

Methods:

The methods for this evaluation were twofold. This evaluation consisted of analysis of data from Public Health and the Office of National Statistics (ONS) to ascertain whether or not an increase in Lateral Flow Testing (LFT) corresponded to a decrease in transmission of COVID-19 in Middlesbrough and Redcar and Cleveland.

In addition to the analysis of this data, purposive, semi-structured interviews were conducted with team leaders and staff from a range of community testing sites in both Middlesbrough and Redcar and Cleveland. The purpose of these interviews was to elicit qualitative data about the experiences of staff on the front line of the community testing programme which would both add to and go beyond the initial analysis of numerical and strategic-level information.

Recruitment:

Recruitment for the qualitative element of this study was achieved through Public Health (PH) and Middlesbrough Council (MC) and Redcar & Cleveland Borough Council (RCBC) contacts. Those who were willing to take part were made aware of the study and invited to contact the research team at Teesside University for more information. In total, 10 individuals took part in interviews (6 Community Testing Team Leaders, 2 Test Operatives, and 2 Workplace Testing Co-ordinators). Amongst those dealing with workplace testing, one individual was responsible for liaising with

³ ONS (2021) Deaths due to COVID-19 by local area and deprivation [Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsduetocovid19bylocalareaanddeprivation>.]

⁴ Dinnes J *et al.* (2021). Cochrane COVID-19 Diagnostic Test Accuracy Group: Rapid, point-of-care antigen and molecular-based tests for diagnosis of SARS-CoV-2 infection: *Cochrane Database Syst. Rev.* 3:CD013705.

⁵ Wise, J. (2020). Covid-19: Timing is critical for antibody tests, finds Cochrane review. *BMJ*: 369:m2584.

multiple businesses over testing, and another was responsible for testing alongside their usual business activity.

Analysis and Themes:

As mentioned above, in total 10 interviews were conducted, ranging from around 30 minutes to 80 minutes. These interviews were transcribed and subjected to thematic analysis by the team (with blind-coding employed to eliminate individual researcher bias) and primary and secondary themes were generated from the interview data. Below is a table detailing these themes.

Primary Theme	Secondary Theme(s)
Engagement	Communication Information Trust
Service Delivery	Logistics Safety Support
Social Factors	Employment Equality Protecting Others
Testing	Procedure Motivation(s) Recovery

Each of these themes fed into answers to the four central questions with which the evaluation is primarily concerned. As such, the report will deal with each of these in turn.

Who is accessing community testing facilities, and how can more people be engaged with the community testing programme?

At all levels, and in both workplace settings and dedicated testing sites, the problem of engaging individuals in the testing process was a constant concern for those involved.

So I wouldn't say there's been a fantastic uptake of the service cos there hasn't. Our busiest days are probably the first day that we open, which is a Tuesday. I'd say that's our busiest. (Female, 41-50; Community Test Site Team Leader).

"So for example, our site could potentially take up to 240 people a day. We aren't getting anything like those numbers" (Male, 41-50; Community Test Site Team Leader).

The perceived lack of engagement from some areas of the community had a number of different explanations, but one notable group for whom engagement was sparse was amongst members of the BAME community:

"From within the community, it's easier to say what I've noticed is lacking. And that is the ethnic groups." (Male, 51-64; Community Test Site Team Leader).

How to address this lack of engagement was something that many interviewees spoke of, but there was no clear 'fix' from any one source, and opinions on the possibly reason and remedy differed greatly. For some the clear answer came from being able to engage with individuals for whom English was not their first language. One centre team leader spoke of the huge advantage one member of their team brought with them to the role regarding engagement:

"One of the key people we've got...is someone who's from that...community. He's been working at that site for us and working with those communities. And he actually speaks four different languages as well. So, when people have come in, he's been able to communicate with them, which has really helped us" (Female, 41-50; Community Test Site Team Leader).

Others felt that engagement was hampered due to the lack of clear communication on what the testing sites were, and how this was communicated within certain communities:

"So there is some confusion with signposting, which I'm hoping is getting sorted out because I've fed that in, because it looks like this is just any other normal COVID testing site. So we've had a lot of people from the African community turn up who are actually positive. They're in the wrong place. And there's nothing we can do for those people." (Female, Undisclosed; Community Test Site Team Leader).

One suggestion for how this lack of engagement may be addressed was to move testing out of designated sites which may be unfamiliar to people and to instead operate the testing scheme peripatetically:

"Rather than expecting people to come to us, we should maybe have thought about going to people where they feel more comfortable, in their environment...that they're comfortable with, and they associate with, rather than hosting it in a venue that perhaps, you know, half the residents...have never been to before" (Female, 31-40; Testing Operative).

This peripatetic approach was seen not only as being able to address issues surrounding engagement more generally (due to transport, time, unfamiliarity with sites) but also as a possible strategy to improve engagement within BAME communities:

"We should make more use of the venues we have around Middlesbrough, we should be tapping into all like the Sikh temple, the mosques, the churches, even if the services are given online, we should be highlighting what we're offering. I think we're lacking that" (Female, 41-50; Community Test Site Team Leader).

A key feature of engagement which touched upon but went beyond the above pertained to the information itself that was available, and the impact that this had on perception and trust of the entire testing process. An issue identified by some concerned the *quality* of the information that they were able to give to people:

"It should in essence be easy, shouldn't it? But...I think the biggest thing across all this is erm, how people interpret things. You know, everybody interprets things differently. And I think that a lot of the information that's come out [from us], hasn't been quite clear enough." (Female, 51-64; Testing Operative).

Competing with what was felt to be at times a lack of coherent (and more importantly *consistent*) information within organisations was the steady flow of misinformation from outside sources that undermined efforts to encourage people to engage in testing. This misinformation didn't even have to directly deal with testing to undermine trust in the process:

“But this, this thing about, if you listen to a lot of the social media - look at the vaccine as an example - when they put the chip into your body, which is, bullshit, I know it is, you know it is, but they listen to it.” (Male, 51-64; Workplace Testing Co-ordinator).

An extension of the notion of information and misinformation was that of trust – be it which information to trust, trusting the results of the tests themselves or a deeper, more pervading trust of myriad factors surrounding the pandemic, and the perception of how this was and is being handled:

“There are people still, you speak to who, since the vaccine...they don't want to wear a mask. They don't want to conform at all.” (Female, 51-64; Community Test Site Team Leader).

The notion of trust and mistrust was spoken about by every participant, but where trust should be placed, and where it should not, varied greatly. Some discussed the endemic mistrust that some groups had for organisations that represented authority and thus avoided engaging with the service:

“I think there's a lack of trust. Yeah, I think a lack of trust of authority, coupled with possibly within their own community. And I don't mean this to sound the way some might interpret it: the control factor from within their own community.” (Male, 51-64; Community Test Site Team Leader).

The level and amount of information collected during the testing process was seen as a distinct barrier to participation:

“I think there's something about the level of information we take from them when they're registering. And there's a lot of lot of info, personal information that we collect.” (Female, 41-50; Community Test Site Operative).

However, others noticed a distinct development of trust over time as people became regular attendees at the testing sites:

I mean, we had some people who were very concerned, too. And we said, well, look, you know, you can come every day, if you want, if that is what you want, if that will give you reassurance. It's not a problem, we're here”. (Female, 51-64; Testing Operative).

One possible remedy for the potential lack of trust that some people were prepared to invest in the centres themselves (and indeed something mirrored by a marked effort in advertising from central government) was the notion of home testing kits. However, this was not without issue, and a concern over the accuracy, and even honesty, of home tests was mentioned in several interviews:

“Quite a few have come in and said they've tested this morning at home. I don't like the home testing. Because they can do whatever they want with the swab. They can drip water on it if they want to.” (Male, 51-64; Workplace Testing Co-ordinator)

“We explained to people...they're only as reliable as the person carrying out the test. So, in a clinical environment, with trained people, you know, you can be hitting 80% accuracy on these tests, but that will drop to 50 or below...if you're just testing at home without...any instructions.” (Male, 41-50; Community Testing Site Team Leader)

How has the community testing programme affected the perception of front-line workers of the safety of their workplace regarding COVID-19?

How services were delivered at present, and indeed how service delivery may be navigated in the future was a key theme throughout interviews. As would be expected, most discussions focussed on the delivery of the testing programme itself, but there was also talk of how the presence of the programme impacted other services and businesses.

The primary area that was important to participants, regardless of whether they were senior staff in testing centres, test operatives or those working in other sectors, was the logistical considerations regarding safety that such a task involved. Some saw this as a task that was well-planned and well-managed:

"I think that the, the sort of the control measures that are in place. are very, very good, you know. We've got the social distancing, we've got the PPE, we've got a strict, you know, method of work that keeps people keeps people apart." (Male, 41-50; Community Testing Site Team Leader).

Although others were happy with how things were at the time of the interview, they nonetheless expressed a concern if demand for testing were to increase:

"I think if, if demand massively increased, then we would have a problem simply because of the, the layout of the building, operationally, it's not really set up for, you know, we have to have, there's no way to queue inside so, we would have to have people queuing outside." (Female, Undisclosed; Community Testing Team Leader).

Most individuals' initial perception of working in test centres and the risk(s) involved regarding exposure to COVID-19 changed dramatically over the course of their time at the test centres, and many reported feeling less anxious and more at ease in their surroundings as time went on:

"When I took this job, I was really fearful, in the way that the first thing I asked was, I won't be testing me like, if I've applied for the team leaders post, I will just be managing." (Female, 41-50; Community Testing Team Leader).

The same individual commented on their shifting views on risk in the testing role once they had seen the levels of Personal Protective Equipment (PPE) they were supplied with:

"When I've seen how we're well protected, it's taken the fear away from me of what it is and how we're handling it. I'm much more comfortable in that environment now." (Female, 41-50; Community Testing Team Leader).

The reassurance provided by the supply of PPE was something that was echoed across the board by participants:

"We're comfortable in the procedure. comfortable in in the manner that we're doing it, it is and always has been very controlled. We are, we've never had a shortage on PPE, we've never had a, an incident that has raised anybody's concerns or anxiety. It has gone really, really well." (Male, 51-64; Community Testing Team Leader)

"Somebody said to me: 'how can you do testing?' Cuz, they're...you know, it could potentially be risky. So well, I had full PPE on I said, I felt very safe. I said, I was working a very large space with good ventilation." (Female, 51-64; Test Operative)

Against such a backdrop, ascertaining any impact upon rates of transmission with any degree of certainty becomes an increasingly difficult task.

Expert opinion on the efficacy of testing is also divided, with some referring to the introduction of twice-weekly testing as ‘misguided’ and ‘unlikely to reduce transmission’⁷ despite NHS guidance that individuals should conduct asymptomatic testing every 3 to 4 days.⁸ However, although it may be difficult to determine the direct impact on levels of transmission, there are possible benefits to testing that are not to do with explicitly reducing the spread of the virus.

The most notable impact of this kind reported by those working within the testing sites was the reassurance they were able to give during a time when many were struggling with the impact of the pandemic and its effect on their mental health:

“Part of my job was also to talk to people because realising that the social isolation that people were experiencing was...pretty horrific. And being able to, to say, well actually, you know, we kind of understand this, we're here, if you need to talk to us.” (Female, 51-64; Testing Site Operative)

Not only were the staff able to reassure individuals with whom they came into contact, but many also reported that the simple act of being tested did much to allay the fears of a proportion of visitors to the sites, particularly those who were, or knew of others who were, clinically vulnerable:

“My partner is also vulnerable... ‘Clinically extremely vulnerable’. And I was extremely cautious, and also I was caring for my elderly grandmother. And, yeah, and so, so I think if you have all those things in place, you're going to be more cautious. Knowing I'm not [infectious] is huge.” (Female, 51-64, Community Testing Site Team Leader).

Can community testing support the recovery of the local area?

As can be seen, the place of testing within the wider, and often shifting and uncertain, landscape of the pandemic is complex. Regarding the contribution that community testing can make moving forward, one of the most powerful aspects of the programme is that it has highlighted and tapped into people’s motivations not only for getting tested but has also provided a glimpse into their motivations for much of their conduct throughout the pandemic. Why individuals have or have not gone to get tested reveals much about their behaviour (and the rationale for that behaviour) in other areas relevant to any recovery effort in future.

For some it is a notion of duty to others that motivates them to engage in testing to minimise the spread of the virus. For others it is the promise of greater freedoms being extended upon providing proof of their uninfected status. One participant spoke of a sense of obligation to others - all others, at all times: a ‘perfect’ obligation⁹:

“Everybody coming through certainly has a sense of, you know, moral responsibility that they want to get tested to ensure that they are negative, and they want to do it because they are working with people and coming into contact with people.” (Female, 31-40; Testing Operative).

⁷ Raffle, A. E., & Gill, M. (2021) Mass screening for asymptomatic SARS-CoV-2 infection *BMJ* 2021;373:n1058

⁸ NHS (2021). Get Tested for Coronavirus [Available from <https://www.nhs.uk/conditions/coronavirus-covid-19/testing/get-tested-for-coronavirus/>]

⁹ O'Neill, O. (1988). Children's Rights and Children's Lives. *Ethics* 98: 445-463.

For others, the motivation was to protect *specific* others, such as friends or family – and this evidenced a motivation linked to an obligation to clearly specified others at clearly specified times (at work, while visiting others etc.):

“If you're gonna meet up with a family at least, you know...you're not at risk. Yeah, there really needs to be a push for that. For people to protect people they know.” (Female, 41-50; Community Testing Team Leader).

For some however, participation in testing was seen as being motivated by something resembling a contractual transaction. Some participants predicted that this would feature more and more as restrictions eased:

“As the lockdown eases the, sort of...not joke...but, the comment that's been passed amongst the staff is: if this passport scheme that's been muted by the government comes into force, and you have to have a passport to say you've had a negative test in the last 24 hours before you're allowed to the pub, there would be a queue at the door.” (Male, 51-64; Community Testing Team Leader).

Of course, there was also talk about the reasons why people may *not* want to be tested that were not part of the above discussion about engagement *per se*. One of the greatest perceived barriers to getting tested was the threat of the significance of the result for some:

“Some people don't want to know the result. So, some people have come in there kicking and screaming, and some people are concerned about losing pay, being sent home.” (Female, 41-50; Community Testing Site Team Leader).

Indeed, discussion of the motivation for participating in the testing programme was not limited to those who came into the centres to be tested. Many participants also spoke of their motivations for becoming involved in the delivery of testing. One of the primary motivations was around the need to feel useful at a time when this was something that people felt had been taken away from them:

“It's been a godsend, because [we] were all working at home and tearing our hair out, we're looking at the same four walls. It's good to do something different to make you feel like you're making some kind of difference.” (Female, 51-64; Testing Operative)

Other participants reflected on the positive effect that returning to a workplace where they could experience normality and social contact had upon their mental health:

“People have been working in isolation, or in different workplaces. I think working at the test centre was actually very good, and helped me with my mental health, in terms of having somewhere to go each day rather than...I think that helps. So, then you have some kind of routine. And that helps.” (Female, 51-64, Community Testing Site Team Leader).

Unsurprisingly, whether or not community testing sites should continue their work was something which all participants spoke of. For many, although the need for continuation of the programme was clear, how this could reasonably be achieved wasn't:

“So, I do think it needs to carry on, but I don't know really and what, they certainly can't keep on paying the number of staff that they're paying.” (Female, 51-64; Testing Operative)

As well as concerns over how and where funding to maintain testing would be found was the fact that many of the workers integral to the functioning of the sites were aware that they would, at some point, be required to go back to their normal roles:

“The sites are getting extended...it’s going to the end of June, but there was no consideration taken to the fact that a lot of the staff, have got substantive posts, that because of lockdown coming out of, they’re needing to go back to their substantive posts.” (Female, Undisclosed; Community Testing Site Team Leader).

Not all were as committed to the idea of the continuation of any requirement to engage in regular testing, and this was certainly the case when testing had to be balanced alongside normal business operations:

“Hopefully...the testing stops. We will...keep in place the PPE. I think is with us forever. I don't think that'll go away. For me, the testing is the biggest, pains the wrong word. It's not like it's not a pain. I know. It's important.” (Male, 51-64: Workplace Testing Co-ordinator)

Recommendations:

Much from the interviews points to the positive impact that testing has had on a variety of areas, but there are also areas in which changes and improvements can be made if the testing programme is to contribute to COVID-19 recovery and management in the future. These recommendations are detailed below:

Continued participation in testing is an important part of COVID-19 recovery. More needs to be done to highlight the benefits of testing.

Engagement with ‘hard-to-reach’ populations can be improved. This may be achieved via a peripatetic (travelling across different sites) approach to testing, improving trust and access amongst these groups.

Although workplace safety for testing operatives has been excellent, more understanding may need to be gained of front-line staff in other sectors, and how to manage the risk posed by clients, customers and service users in the future.

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Although home testing does much to navigate issues surrounding engagement, the potential for decreased reliability and accuracy of test results must be taken into account when considering this option.

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