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GOVERNMENT OF MONTSERRAT

High-risk human papillomavirus (hrHPV) prevalence and associated risk factors in women from Montserrat

Version 1.0



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Executive summary

With no universal HPV screening programme and limited colposcopy and cervical screening programmes in Montserrat, an HPV prevalence study was recommended to estimate the prevalence high-risk HPV (hrHPV) genotypes in women of 'screening age' and extrapolate the findings to inform and make recommendations to cervical screening and vaccination programmes.

Random spatial sampling was applied to 2023 census data to select 520 buildings and recruit 208 women to estimate a hrHPV prevalence of 20%, with 5% precision at 5% significance level, accounting for a 40% response. Resident women aged 25–64 years were invited to participate and given the choice between self-collection or clinician-administered sampling. Samples were tested with the GeneXpert assay for 14 hrHPV genotypes. Sampling weights were applied to reflect the age distribution in the population. Known risk factors associated with hrHPV positivity were collected via questionnaire and examined using logistic regression.

Of 225 eligible women, 206 (92%) consented to participate with 187 women submitting a sample despite reminders (83% of those eligible), 96% opted for self-sampling and 98% were unvaccinated. All age groups were represented in the study population. Overall hrHPV prevalence was 14.7% (95%CI:10.3-20.6); prevalence of HPV16 was 2.0% (95%CI:0.7-5.2) and HPV18/45 was 1.6% (95%CI:0.5-4.8) respectively. Although the trend was not significant, odds increased with decreasing age, and those aged 25-34 years had nearly four-fold greater odds compared to 55-64years (OR=3.9, 95%CI:1.1–18.7; $p<0.05$).

These findings suggest that vaccine-preventable hrHPV is present in the female population in Montserrat, with a trend of increased prevalence in younger age groups consistent with findings from previous Caribbean Island studies. HPV16 and 18 do not predominate in the study sample.

Universal or age-targeted screening and vaccination programmes should be considered in Montserrat. Self-sampling HPV testing was acceptable to women and should be considered for any future screening programme.

Introduction

Montserrat context

Montserrat is a UK Overseas Territory with a population of 4,386 people recorded in the 2023 census, located in the Caribbean, part of the Lesser Antilles chain.

There is no comprehensive population screening programme for cervical cancer in Montserrat, however some services such as colposcopy and pap smears are available with samples sent off island for analysis, taking 6-12 weeks to be processed and returned. The cost of this offshore transport is borne by the patient/individual. Prior to this study, HPV testing was not available on island. There is no evidence available to determine the burden of HPV infection in the local population.

A report conducted in 2023 assessed cervical screening participation amongst female in Montserrat and estimated that only 7% of the eligible population were screened in 2022. However, this report made the assumption that women should be tested once within a three-year interval, and that a woman tested in one year would be exempt from the eligible population count for the following years. It should also be noted that some individuals may have sought Pap smear tests off-island or in the private sector, which would lead to an underestimation of screening rate.

Montserrat launched an HPV vaccination campaign in November 2017. The initial target for vaccination included girls and boys, ages 9 and 14, with an eventual expansion to women up to 45 years of age. The campaign succeeded in vaccinating just 33 individuals (25 girls, 3 boys and 5 adult women). The vaccine has not been available locally as of June 2019. Several reasons have been postulated for the low uptake of the vaccine to include insufficient sensitization and education of the public and pervasive spread of misinformation.

Public health importance

Human papillomavirus (HPV) is a group of viruses that commonly infect humans; the majority of HPV infections are cleared by the immune system within one or two years and do not cause harm. However, some HPVs (known as high-risk HPVs – hrHPV) can lead to cancers such as cervical, vaginal, vulvar, penile, anal and oropharyngeal cancer, if not detected and treated in a timely way. HPV related cancers can affect both males and females. The main transmission route for HPV is through sexual contact. HPV genotypes 16 and 18 are responsible for approximately 70% of cervical cancers globally (1, 2) and there are an additional 11 high-risk genotypes (31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 68) (3). Cervical screening to identify cell changes in the cervix (also known as cervical dysplasia or cervical intraepithelial neoplasia) is key to early detection and treatment that can prevent progression to cancer.

Vaccines to protect against a number of hrHPV genotypes (including 16 and 18) are available and their use is recommended globally by the World Health Organisation and other international and national health agencies (4, 5). In the UK, the HPV vaccination programme in girls, first implemented in 2008 (initially protecting against genotypes 16 and 18) has led to

an almost 90% reduction in cervical cancer rates in women in their 20s when vaccinated at 12-13 years of age over 11 years (6). The UK programme switched to the Gardasil vaccine in 2012, which in addition to genotypes 16 and 18 also included genotypes 6 and 11 which are low-risk for cervical cancer, but are known to cause genital warts. The programme was extended in 2019 to include boys from 12 years of age, with the aim of providing direct protection against genital warts, anal, penile and oropharyngeal cancers, as well as indirect protection for non-vaccinated males and females. The Gardasil 9 vaccine currently available in many countries globally (available in England since 2022) protects against 7 cervical cancer causing genotypes (16, 18, 31, 33, 45, 52, 58), and additionally protects against the genital warts associated genotypes 6 and 11 (7, 8). HPV vaccination has been demonstrated to be cost effective in almost every country in the world. WHO have called for the elimination of cervical cancer with HPV vaccination a core pillar of this programme, alongside screening and treatment (9, 10).

HPV prevalence in the Caribbean

The HPV prevalence in Montserrat is unknown. However, a recent study in Curaçao estimated the prevalence of HPV in women at 20%, with HPV16 being the most common high-risk genotype, followed by other high risk genotypes 35, 18 and 52 (11). In Martinique HPV prevalence (18 high-risk genotypes) was estimated at 19% in a study conducted between 2009 and 2014 (12). In Saint Kitts and Nevis and Saint Vincent and the Grenadines hrHPV was detected in 25% and 30% of women attending clinics on the islands respectively (13).

Cervical screening

Cervical screening via HPV DNA testing involves the collection of cells from either the cervix or the vagina using a cytobrush or cotton swab. This procedure has typically been carried out at appointments with healthcare staff where cervical samples are collected using a cytobrush. However, studies have found that the accuracy of vaginal self-swabbing is comparable to cervical sample collection undertaken by healthcare staff (14-16) with other advantages such as increasing acceptability by providing choice for women, which may increase reach to underserved communities.

Cervical screening using HPV DNA testing of cervical cell samples is offered from 25 years of age in the UK (with tests every 3 years up to 49 years of age, and subsequently every 5 years between the ages of 50 and 64 years). Another cervical screening method is Pap tests, which involve examining cervical cell samples under a microscope to detect cell abnormalities. In the US, screening using Pap tests as the primary screening method are offered from 21 years of age (with repeat tests every 3 years) and from 30-65 years of age have options of Pap tests and HPV testing (17, 18).

Cervical screening rates amongst Caribbean populations are thought to be lower than recommended levels, and whilst in some Caribbean nations there are established screening programmes in place, others rely on opportunistic and ad-hoc screening (19-21).

Recommendation for a HPV prevalence study

Following on from the cervical screening report carried out in 2023, local stakeholders involved in the cervical cancer screening programme, immunisation and laboratory staff, reviewed the existing situation and data from the report, and recommended a HPV prevalence study, using local laboratory PCR testing facilities as a first step to inform any future HPV vaccination and cervical screening programmes.

Aims and Objectives

Aim

Estimate the prevalence of HPV infection (and specifically high-risk genotypes) in Montserrat in women of 'screening age' and extrapolate the findings to inform and make recommendations to cervical screening and vaccination programmes.

Primary Objective

To estimate the prevalence and genotypes of HPV infection in females between the ages of 25 and 64 years in Montserrat, by demographic characteristics

Secondary Objectives

Describe and compare demographic characteristics associated with infection with high-risk HPV genotypes in females between the ages of 25 and 64 years in Montserrat.

Estimate the number of women willing to undertake self-swabbing and determine the perceived acceptability of self-swabbing to the women.

Provide evidence base for decision makers as to what the screening requirements may be and inform discussions about a potential population-level HPV screening programme and universal HPV vaccination programme.

Methods

Study design

Cross-sectional prevalence study

Study population

Inclusion criteria

- Females resident in Montserrat aged between 25 and 64 years

Exclusion criteria

- Female resident in Montserrat for less than 6 months
- Females aged under 25 years of age, or over 64 years of age.
- Females who had undergone a hysterectomy.
- Those who were pregnant or less than 3 months postpartum.
- Those diagnosed with cervical (pre)cancer in the last 2 years or on-going treatment with chemo- or radiation therapy.

Sampling and recruitment

Sample size calculation

Rates of regular cervical screening appear to be low in the Caribbean islands, however some studies show that the proportion of women that have never attended cervical screening is small (21-23). This suggests that overall, women may not be reluctant to regularly attend for screening and so a potential response to a one-off screening invitation may be higher than the current annual screening rates (where women are not routinely invited). It is also assumed that the study participants would not need to pay out of pocket to be screened as part of the survey, so this may also increase participation rates. Therefore, for this study a response rate of 30-40% has been estimated.

Estimated HPV prevalence in females in Caribbean small island communities (based on previous studies in other Caribbean islands (11-13)): 20%

Significance level of 5%

Confidence width of 0.05

Population of females aged 20-65y: 1316 (24)

Sample size needed for study (i.e., number of females who decide to participate and undergo testing): 208 females

Estimated response rate: 30-40%

Sample size to invite (i.e., number of females who need to be invited to participate): 520-694 females

Sample size calculation carried out using Epitools (25).

Sampling strategy and recruitment

Random household sampling was undertaken in Quantum GIS (QGIS) on building footprints recorded during the 2023 Montserrat census (26).

A sample of 520 buildings was taken for initial visits and invitations, with an additional 174 buildings sampled for visits and invitations (upper sample size threshold) in the event of the sample size threshold not being met in the first round of recruitment.

Recruitment took place from October 2024 to March 2025.

Randomly selected buildings were visited by the study team data collectors (local healthcare professionals including clinical nurses, public health nurses and medical laboratory technologists) to invite participants. Where more than one eligible woman was present in a household, then all of them would be invited. Where abandoned houses, structures that were not households or if there was no eligible person in the household, then the nearest house was selected by choosing the nearest house to the left (when looking at the building), or where there was no house to the left then the next house in an anti-clockwise direction was selected. In remote areas with no nearby houses to act as replacements the building selection was discarded. For buildings with multiple households (e.g. blocks of flats), a random number was generated by the study team and that household was visited within the building. For absent households attempts were made to contact that individual (where they are known to the surveyor), or a second visit was made at a later time.

Following invitation, a deadline of two weeks was given for participants to respond and confirm their participation in the study; otherwise, they were assumed to have declined.

Data collection

Questionnaire

A short questionnaire was completed for each participant to gather demographic information and other relevant factors. Each study participant was given a unique study ID number. Questionnaires were administered by study team data collectors at the point of entry into the study, after consent had been completed. See questionnaire in Appendix A.

Specimen collection

After confirming interest in study participation, testing options were provided to each participant. Self-testing was the main method of specimen collection promoted, with an option for a clinician to undertake the testing for those who prefer; preference for either method was ascertained during recruitment to the study. A test kit for carrying out a high vaginal swab was handed out at the point of consent to participate. Women deciding to perform a self-test, could either undertake the test immediately and the study team transported the sample to the main laboratory at Glendon Hospital. Or they could perform the self-test later and deliver the sample to the nearest clinic (St John's, Cudjoe Head, St Peter's or Salem) within 24 hours of taking it. Any women who agreed to self-test and who

did not return a sample before the end of the study were followed up by the study team; any women with outstanding samples at the end of the study were assumed to have declined to participate.

Laboratory testing

All samples were tested in the main laboratory at Glendon Hospital, Montserrat. The GeneXpert assay was used for PCR detection of 14 hrHPV genotypes through three separate channels (HPV16, HPV18 and 45, and other high-risk genotypes (HPV31, 33, 35, 52 and 58, HPV51 and 59 and HPV39, 56, 66 and 68)) (27). Of these genotypes, 7 of them are contained in the Gardasil 9 vaccine (16, 18, 31, 33, 45, 52, and 58) (8).

Negative results were provided by phone, whilst positive results were given in person at clinic appointments with a gynaecologist. Any positive results were managed and followed up by clinicians as per established clinical pathways (Appendix B).

A repeat high vaginal swab was requested for any invalid tests, or where specimens were grossly mucoid or blood stained.

Data cleaning and linkage

The laboratory and questionnaire datasets were checked for missing or erroneous data and any duplicate or erroneous study ID numbers were resolved.

Data linkage

Questionnaire and laboratory data were linked using study ID number. The final linked dataset was manually checked against paper laboratory records prior to analysis. Each categorical variable was tabulated to check counts in each category of a variable and regrouping was done where appropriate to avoid presentation of small numbers.

Data analysis

The response rate was calculated for those enrolled following the initial invitation, and also for those who enrolled and subsequently submitted a sample.

The representativeness of study population was calculated using a chi-square test to compare the age distribution of study population to the age distribution of the cervical screening age population in Montserrat.

Age-adjusted prevalence for each hrHPV genotype group and overall prevalence was calculated including 95% confidence intervals. Sampling weights were calculated based on the sampling frame and each set of weights was calibrated to the 2023 census enumeration by age group (28).

The number of study participants and the number of positive tests were summarised by demographics characteristics and hrHPV risk factors, and logistic regression was used to

calculate odds ratios and 95% confidence intervals. The testing option selected by each study participant was summarised. All analyses were performed using R 4.3.1.

Ethics and confidentiality

Ethical approval was granted by Montserrat's Chief Medical Officer.

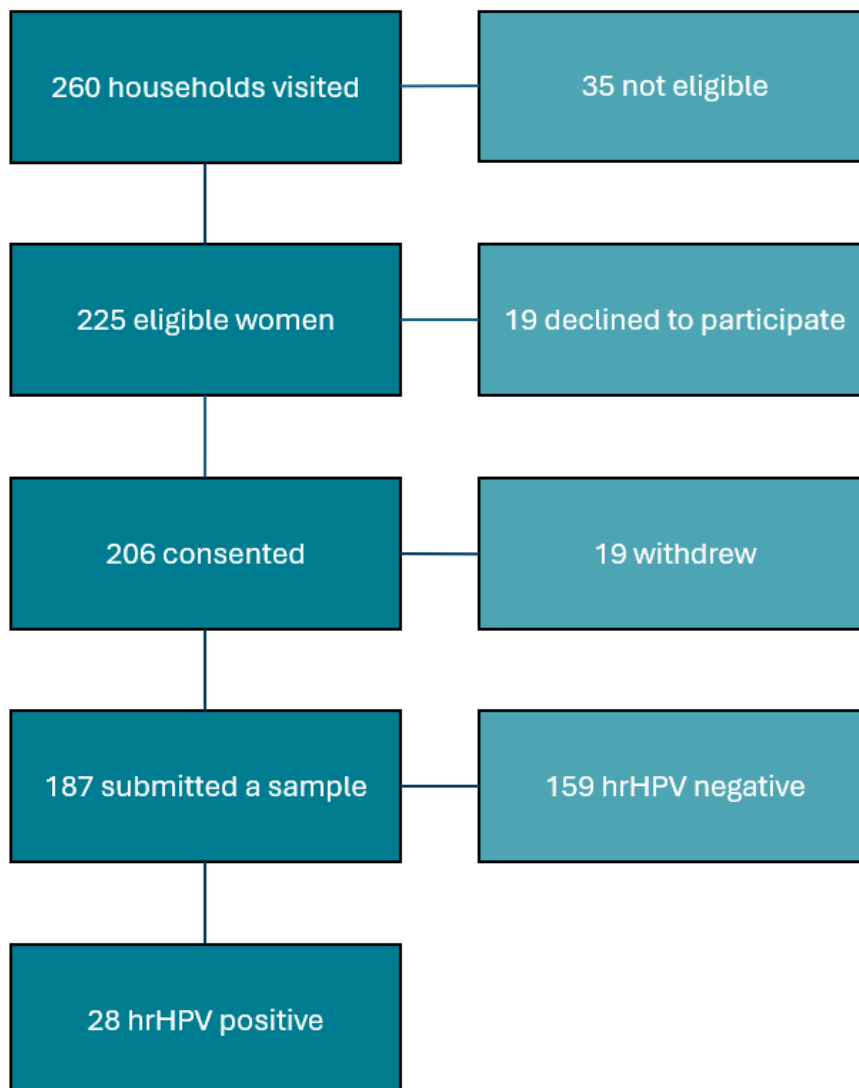
Participants received a participant information leaflet outlining the purpose of study as well as background information on HPV and cervical screening. All participants signed a consent form prior to enrolment in study.

Data was used in accordance with Caldicott principles and managed as per Information Governance and Data Protection rules.

Results

Of 260 households approached, there were 225 eligible women and 206 (92%) consented to participate in the study. A total of 187 women submitted a sample (83% of eligible women). There were 19 women who enrolled but subsequently withdrew and did not submit a sample (Figure 1).

Figure 1. Flow chart of study recruitment and study participants



The age distribution of study participants are described in **Error! Not a valid bookmark self-reference.** with a comparison to the cervical screening age population in Montserrat. There was no significant difference seen between the study population and the Montserrat female population (p=0.15).

Table 1. Comparison of Montserrat female population and study population

Age group	Total females in Montserrat (n) ¹	Total females in study population (n)
25-34 years	264	39
35-44 years	312	62
45-54 years	307	49
55-64 years	307	37

¹Montserrat Census 2023

$\chi^2 = 5.3412$, df = 3, p-value = 0.15

Prevalence of high-risk HPV

There was a total of 28 samples positive for hrHPV and overall age-adjusted hrHPV prevalence was 14.6% (95% CI: 10.2 – 20.6). The highest prevalence was found for the other high risk genotypes (11.1%, 95% CI: 7.3 – 16.6), followed by HPV16 (1.9%, 95% CI: 0.7 – 5.1) and HPV18/45 (1.6%, 95% CI: 0.5 – 5.0) (Table 2).

Table 2. Age-adjusted high-risk HPV prevalence, overall and by genotype

Genotype	Positive samples (n)	Prevalence (%) (95% CI)
HPV 16	4	1.9 (0.7 – 5.1)
HPV 18 or 45	3	1.6 (0.5 – 5.0)
HPV Other High Risk	21	11.1 (7.3 – 16.6)
Overall High Risk HPV	28	14.6 (10.2 – 20.6)

Risk factors for high-risk HPV

There was a trend of increased odds of testing positive for hrHPV with decreasing age; those aged 25-34 years had nearly four-fold increased odds compared to 55-64 years (OR=3.9, 95%CI: 1.1-18.7; p=0.05). There were no other characteristics significantly associated with testing positive for hrHPV. Notably three women in the study population had received an HPV vaccine and all tested negative for hrHPV (Table 3).

The majority of study participants opted for self-testing (180/187, 96%), with the proportions opting for self-testing being equal across those testing negative and those testing positive. (Table 3).

Table 3. Univariable analysis of characteristics associated with high-risk HPV in women in Montserrat

Characteristic	Negative N = 159 [†]	Positive N = 28 [†]	OR (95% CI)	p-value
Age group				
55-64 years	34 (21%)	3 (11%)	Ref	
45-54 years	44 (28%)	5 (18%)	1.29 (0.30-6.63)	0.7
35-44 years	52 (33%)	10 (36%)	2.18 (0.61-10.20)	0.3
25-34 years	29 (18%)	10 (36%)	3.91 (1.08-18.70)	0.05
Tobacco smoking				
No - never smoked tobacco	150 (94%)	27 (96%)	Ref	
Yes - either current or previous tobacco smoker	9 (6%)	1 (4%)	0.62 (0.03-3.49)	0.7
Contraceptive use				
No	55 (35%)	10 (36%)	Ref	
Yes - either current or previous user of oral contraceptives	104 (65%)	18 (64%)	0.95 (0.42-2.28)	>0.9
Number of children				
None	16 (10%)	5 (18%)	Ref	
1	28 (18%)	8 (29%)	0.91 (0.26-3.46)	0.9
2	49 (31%)	7 (25%)	0.46 (0.13-1.73)	0.2
3 or more	66 (42%)	8 (29%)	0.39 (0.11-1.43)	0.14
Previous cervical cancer screening				
No	32 (20%)	4 (14%)	Ref	
Yes (in the last 3 years)	88 (55%)	13 (46%)	1.18 (0.39-4.43)	0.8
Yes (more than 3 years ago)	39 (25%)	11 (39%)	2.26 (0.70-8.76)	0.2
If you have previously had cervical screening, have you ever had an abnormal result?				
No - all normal results	117 (92%)	21 (88%)	Ref	
Yes I have previously had an abnormal result	10 (8%)	3 (13%)	1.67 (0.35-6.02)	0.5
Have you received a HPV vaccine?				
Yes	3 (2%)	0 (0%)	-	
No	156 (98%)	28 (100%)	-	
Study testing option				
Attending clinic	6 (4%)	1 (4%)	Ref	
Self-testing	153 (96%)	27 (96%)	1.07 (0.17-20.5)	>0.9

[†]n (%)

Discussion

This study represents the first population-based estimate of high-risk HPV (hrHPV) prevalence in Montserrat. The overall hrHPV prevalence in Montserratan women of 14.6% was lower but comparable to previous Caribbean Island studies (11-13).

Other Caribbean island studies have shown varying genotype predominance (11-13) with lower prevalence of HPV16 and HPV18 which are known to cause around 70% of cervical cancers globally (1, 2). In this study the highest hrHPV prevalence was observed in the “other high risk” genotypes collectively (31, 33, 35, 39, 51, 52, 56, 58, 59, 66, 68). However, the GeneXpert assay does not differentiate between these eleven genotypes. Therefore it is unclear whether a single genotype accounted for the majority of positive results or if multiple different genotypes were detected.. Comparisons of results between studies should be made with caution as different assays were used in each study.

Those aged 25-34 years were more likely to test positive for hrHPV, as has been seen in other studies. No other risk factors were identified in this study, though the study was not designed to detect differences.

Only three study participants had received an HPV vaccination, therefore the vast majority of the study population would not have been protected against the hrHPV genotypes contained in the vaccines.

The majority of study participants opted for self-sampling, which indicates that this method of testing is acceptable to most women in Montserrat. Where possible data collectors encouraged testing at the point of enrolment to the study and facilitated delivery of the samples to the laboratory. Some women who delayed testing at the time of enrolment subsequently dropped samples directly to the laboratory. The majority of women took samples to their nearest district clinic and these were taken in batches to the laboratory (transport arranged by the ministry of health). Due to the small number of women opting for clinician sampling, it was not possible to compare characteristics between the self-sampling and clinician sampling groups. By offering self-sampling, this allows women to undertake the test at their own convenience without the need for a scheduled appointment. The burden on healthcare staff is also reduced, with additional clinics not being required. The option for clinician sampling should still be offered for those women who would prefer this method to ensure that all women feel confident and comfortable to undergo screening.

As part of the study, HPV DNA testing was carried out on-island for the first time, with the capability to process samples on the same day, or the next working day. This allowed for the prompt return of results and arrangement of follow up appointments for those individuals who tested positive. Controls were run 2 - 3 times during study period. Five members of laboratory staff were involved in testing over the study period and the rotation of staff allowed for all members to hone PCR testing and sample processing skills. Prior to this study samples were sent off island for testing, with results processed and returned 6-12 weeks later.

The field work for this study was successful in working to the processes outlined in the protocol and the study team data collectors followed the sampling guidance to ensure a random selection of eligible women were invited to participate in the study. There were

challenges identified by the data collectors, specifically the selection of abandoned buildings or non-residential homes which required identification of replacement buildings in the field taking extra time. The use of paper maps also made it difficult for data collectors to orientate themselves, so the use of online maps and GPS software should be considered when conducting studies such as this. Despite the field work being carried out per-protocol, the minimum sample size was not reached, however this study utilised random sampling and the enrolment rate amongst eligible women was high and so these results are likely to be representative of the Montserrat female population. It is therefore unlikely that there are any under-represented groups.

As part of the field work active follow-up was needed with study participants who did not return their samples in a timely manner. A number of options were available to women to increase ease of sample return, but individual follow up was still required in some instances. Any self-testing screening programme offered in the future should consider healthcare infrastructure, logistics and other relevant factors to increase sample return rates and reduce test kit wastage, as well as reducing the follow up time required from healthcare staff.

Further work should be considered to investigate reasons for declining screening as there was a proportion of women who either declined to enrol, or withdrew from the study and did not provide a sample. Anecdotally, reasons for not participating in the study or withdrawing from the study included: anxiety around possible positive test, lost sample container, discomfort with self testing, fatigue with being reminded to test, language barrier (follow ups were more difficult for non-English speakers) and inconvenience of having to drop off the sample.

All individuals testing positive were referred to the local gynaecologist as per the protocol in Appendix B. However, the results of colposcopy and the associated biopsies for these women were not available when this report was generated.

The importance of establishing a cancer registry in Caribbean countries is recognised (29). Provision of universal cervical screening in Montserrat could contribute towards a Montserrat cervical cancer registry with all data and results available on the island. This would allow for the monitoring of cervical cancer incidence and trends in Montserrat.

Conclusions

The high prevalence of hrHPV shows there is a need for screening in Montserrat and the high level of acceptability for self-swabbing suggests it is possible to achieve high screening coverage with this approach. HPV DNA testing as the primary screening method benefits patients as it can be carried out on island, with no cost to the individual and improved timeliness of return of results compared to off-island testing. There was a high enrolment rate amongst women eligible for cervical screening, but further work could be considered to investigate reasons for declining screening, and reasons for not returning self-testing kits to reduce wastage and staff time required for follow up. Consideration should be given to implementing a universal HPV vaccination programme in Montserrat that would protect both men and women against the vaccine-preventable hrHPV genotypes.

Recommendations

- High-risk HPV is present in the female population in Montserrat, and so the implementation of a universal cervical screening programme using HPV DNA testing as a primary screening method aimed at women aged 25-64 years is key to early detection and treatment to prevent progression to cervical cancer.
- As is the recommendation in the UK, women should be invited for screening every 3 years between the ages of 25 and 49 years, with those aged 50 to 64 years invited to screening every 5 years.
- Self-testing is acceptable to the majority of women in Montserrat and so a cervical screening programme should consider this as the primary method of testing to reduce the burden on healthcare clinics and staff, and provide greater autonomy to the women of Montserrat. An option for clinician testing should also be made available.
- Vaccine-preventable HPV genotypes were detected in this study and so a universal HPV vaccination programme should be considered for a roll out on the island to protect both boys and girls against future HPV infection.



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Appendices



Appendix A: Questionnaire

abc	* [A1] Surveyor Initials Enter your initials here
	* [A2] Date of interview Day month year when you are conducting the interview
123	* [A3] Household number HH number from the map
	* [A4] Village name Name of village in which you are conducting the interview

▼ **Introducing the study and checking eligibility**

	[Ask to speak to all adult females in the household] If there is more than one adult female in the house, you will need to complete the form separately for each of them.If no one (or no adult woman) is a
	The Ministry of Health & Social Services wants to reduce cervical cancer in Montserrat, so we are doing a health study to understand how <i>Question hint</i>
	Your household has been randomly selected to take part and we would like to offer cervical screening to any woman living in this household <i>Question hint</i>
	Check there is no reason a woman cannot take partTo be eligible they should answer YES to the following:1. Have you lived in Montserrat <i>Question hint</i>

	▼ Confirm the respondent is eligible <i>Question hint</i>
---	---

	yes								
	no								

High-risk human papillomavirus (HPV) prevalence and associated risk factors in women from Montserrat

▼ Consent

● Could we now spend some time to talk about the study? You can then decide if you want to participate – you are completely free to choose. If no then ask them if they want to get the information pack, and then thank them for their time. Record no below. If now is not the best time ask when

<input type="checkbox"/> yes - go ahead with discussing the study	yes__go_ahead_with_
<input type="checkbox"/> no - would not like to discuss the study or participate	no__would_not_like_t
<input type="checkbox"/> now is not the best time to discuss the study - rearrange visit	now_is_not_the_best_t
+ Click to add another response...	

▼ Study information and consent

☰ Cervical cancer is a cancer that's found anywhere in the cervix, which is the opening between the vagina and the womb, sometimes called...
Question hint

☰ Taking part in the study would firstly involve answering a few short questions about yourself, including your age, health and lifestyle. ...
Question hint

☰ The sample would be tested at the laboratory at the Glendon Hospital. The laboratory would look for high-risk human papillomavirus, ...
Question hint

☰ The information we would collect (including your laboratory test) is confidential and your name would only be available to a clinician to ...
- Ask if they have any questions (check FAQs sheet)


☰ If you're happy to participate, I'm going to give you this leaflet with some more detailed information and instructions on how to perform ...
Wait for them to read leaflet, and answer any questions

● If you are comfortable that you understand everything, do you consent to participate?
If yes, ask them to complete and sign the consent form. If no, thank them for their time and record in kobolf they need more time to think or want to ...


<input type="checkbox"/> yes	yes
<input type="checkbox"/> no	no
<input type="checkbox"/> decision to participate not made today	decision_to_participate_


High-risk human papillomavirus (HPV) prevalence and associated risk factors in women from Montserrat




Questionnaire


 I will now ask you for your date of birth and some health and lifestyle questions
Question hint





abc [B3] Unique study ID
IMPORTANT! This should match the study ID on the consent form


 * [B2] What is your date of birth?
If the person does not say the name of the month but only the number, confirm the NAME of the month. PLEASE ENTER THIS CAREFULLY!







 * Have you ever regularly smoked tobacco products of any kind?
Explain that means as a cigarette, cigar, pipe etc. 'Regular' means smoked at least once a week during any period of their life.

 yes - current tobacco smoker	1
 yes - previously smoked tobacco	0
 no - never smoked tobacco	no__never_smoked_toba

 Have you ever taken oral contraceptives?
Question hint

 yes - current user, for over 5 years	y_over5
 yes - current user, for less than 5 years	y_less5
 yes - previous user	y_previous
 no	no
+ Click to add another response...	

 How many children have you given birth to?
This includes still births

 None	none
 1	1
 2	2
 3	3
 4	4
 5 or more	5_or_more

High-risk human papillomavirus (HPV) prevalence and associated risk factors in women from Montserrat

Have you previously had a screening test for cervical cancer?
 This could be a Pap smear or vaginal swab

<input type="checkbox"/> Yes (in the last year)	yes_in_the_last_year
<input type="checkbox"/> Yes (in the last 3 years)	yes_in_the_last_3_years
<input type="checkbox"/> Yes (more than 3 years ago)	yes_more_than_3_years
<input type="checkbox"/> No, never had a cervical screening test	no_never_had_a_cervice
<input type="checkbox"/> Unsure	unsure
+ Click to add another response...	

If you have previously had cervical screening, have you ever had an abnormal result?
 For abnormal results - this is EVER having received an abnormal result

<input type="checkbox"/> No - all normal results	normal
<input type="checkbox"/> Yes I have previously had an abnormal result	abnormal
<input type="checkbox"/> Unsure	unsure
+ Click to add another response...	

Have you received a HPV vaccine?
 Question hint

<input type="checkbox"/> yes	yes
<input type="checkbox"/> no	no

Test kit

- Thank you for answering the questions. I can now give you the test. However, there are a few reasons why you may need to delay taking the test. If any of these apply to the participant, then you can still provide the test kit, but ask them to take the test at a later date
- Self swabbing: If it is convenient then I can wait whilst you do the test now and I can deliver your sample to the laboratory. Or if you would like, I can provide you with a demonstration brush. [Provide them the test kit with instructions] [If they are concerned about brush test kit, then allow them to feel a demonstration brush]
- Clinician testing: Arrange an appointment for the participant
 Question hint

Testing option
 Question hint

<input type="checkbox"/> Self-testing	self_testing
<input type="checkbox"/> Attending clinic	attending_clinic

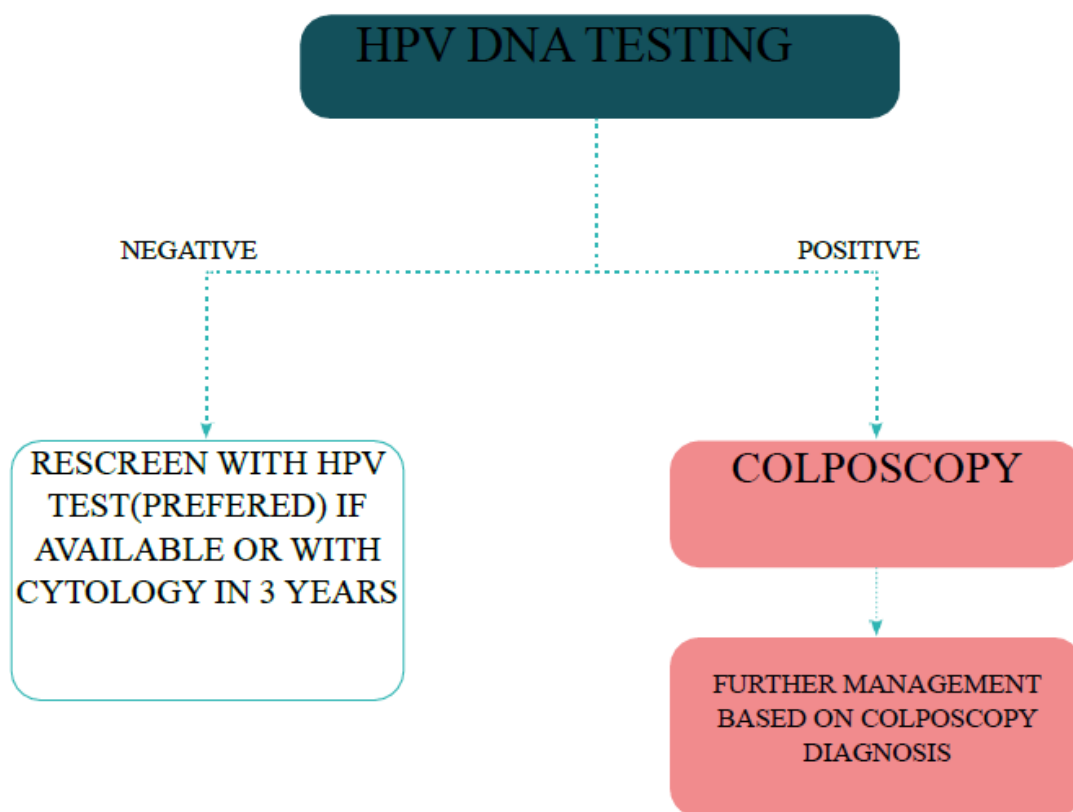
High-risk human papillomavirus (HPV) prevalence and associated risk factors in women from Montserrat

▼ Clinician testing	
☰	<p>Give some information on attending a clinic for an appointmentRemind them to take test kit to appointment</p> <p><i>Question hint</i></p>
☰	<p>Thank the respondent(s) for their time.</p> <p><i>Question hint</i></p>
abc	<p>Comment</p> <p>If there is any comment you want to make about this respondent write it here. Regarding the HH, write here if the HH is a substitute for an ineligible HH,</p>

Appendix B: Algorithm for primary HPV DNA screening and colposcopy triage in Montserrat

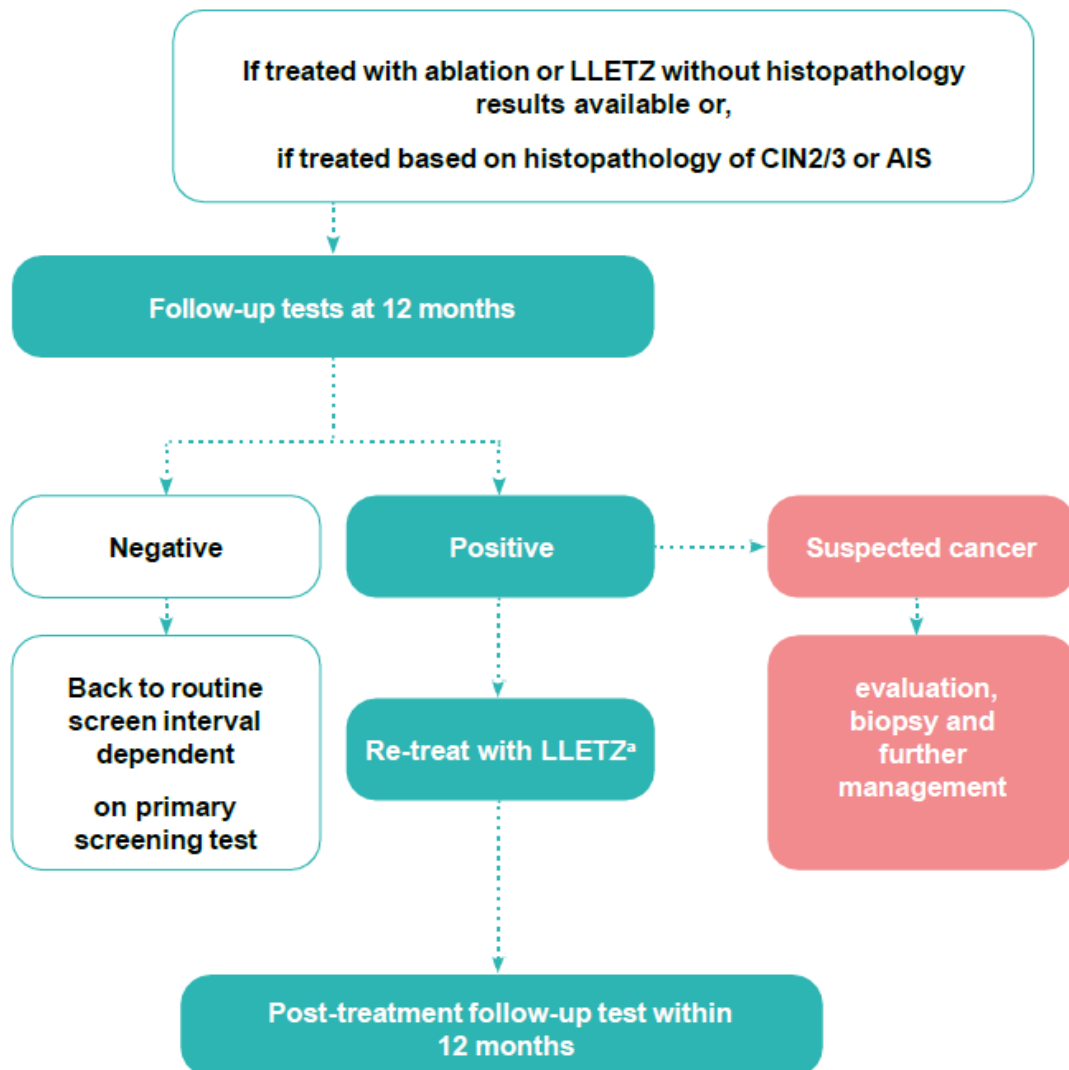
ALGORITHM FOR PRIMARY HPV DNA SCREENING AND COLPOSCOPY TRIAGE (SCREEN, TRIAGE AND TREAT APPROACH) IN MONTSERRAT.

For both the general population of women and women living with HIV



ALL THE CLIENTS PARTICIPATING IN THE STUDY WILL BE INFORMED via PHONE (BY THE MEDICAL RECORDS DEPARTMENT) WHEN THEIR RESULTS ARE AVAILABLE. THEY WILL BE GIVEN A CLINIC APPOINTMENT WITH THE GYNEACOLOGIST TO DISCUSS SAME.

FOLLOW-UP TESTS AT 12 MONTHS POST-TREATMENT.



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