Title: Exploring the effects of an intravaginal lactic acid gel on the vaginal microbiome
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Abbreviations:

- **BV: bacterial vaginosis**
- **CV: candida vaginitis**
- **HRT: hormone replacement therapy**
- **CST: community state types**

Section I: Purpose and Background

1. Specific aims and objectives:

This project aims to investigate if the contraceptive method, Phexxi, causes changes to the composition of the vaginal microbiome. We hypothesize that regular use of Phexxi will cause increased colonization of lactic acid-producing lactobacilli, which could have positive effects in the way of preventing recurrent episodes of BV and candida infections.

Primary outcomes

a. To assess if the use of Phexxi causes changes in the vaginal microbiome
b. To assess if the use of Phexxi decreases vulvovaginitis symptoms in study participants

Secondary outcome

a. To assess patient satisfaction/acceptability of this intervention as a therapeutic/prophylactic agent for recurrent vulvovaginitis

2. Background, significance, and rationale

Bacterial vaginosis (BV) and candida vaginitis (vaginal yeast infection) are debilitating, long-term conditions which have been associated with decreased confidence and self-esteem, difficulty with sexual intimacy, and decreased quality of life amongst women who suffer from one or both chronically. BV has a particularly high rate of recurrence, with an estimated 30% of infections recurring within three months of treatment, and an estimated 50% of infections recurring within six months of initial treatment[1].

Systematic reviews and meta-analyses estimate the global prevalence of vulvovaginal candida infections to be 6% in women of reproductive age (described in most studies as 15-54 years old), and the prevalence of BV to range from 24-49% globally. Due to factors such as the increased usage of antibiotics and hormone replacement therapies (HRT), the increased use of glucosuria-causing diabetes medications, as well as the increased prevalence of sexual adventurousness in women >50 years old, it is estimated that the overall prevalence of vulvovaginitis will only continue to rise. As such, it is imperative to continue to explore and expand treatment and prevention options available for vulvovaginitis[2,3].

While the pathophysiology of recurrent vulvovaginitis is poorly understood, vaginal health has been largely attributed to the makeup of an individual's vaginal microbiome. Vulvovaginitis is thought to occur when the pH of the vaginal microbiome is less acidic, leading to increased growth of vaginitis-causing organisms, including Candida spp or Gardnerella spp, but also including less commonly discussed species[4].

Recent advances in genetic sequencing technology have allowed for more extensive categorization of the microorganisms which comprise the microbiome. The use of molecular approaches, such as Next-Generation sequencing of the vaginal microbiome, has helped researchers to identify many more species within the vaginal flora, and to gain a better understanding of how these species are affected by their interaction with each other, as well as the environment around them. Next-generation sequencing and other similar molecular approaches have thus become the preferred method for research on the vaginal microbiome, including research contributing to the NIH's Human Microbiome Project[5].

The presence of lactic acid-forming lactobacilli has been shown to promote eubiosis of the vaginal microbiome through several mechanisms, including the production of antimicrobial compounds (eg H_2O_2, lactic acid, bacteriocin-like substances), competition for adhesion sites in the vagina, as well as the formation of antibiotic-like compounds[6]. In a landmark trial done by Ravel et al. in 2010, four CST (community state types) were used to classify the vaginal microbiome of the study population. Of the four CSTs, CST 4, which contained primarily non-lactobacilli species, was most closely associated with the development of symptomatic BV or yeast infections. This community state type can be differentiated into three subtypes, all typified by higher proportions of anaerobic, non lactic-acid producing bacteria. Without a significant presence of lactic acid, the vaginal microbiome in this CST is vulnerable to disruption, which may be a possible contributing factor to the increased incidence of BV/yeast seen in this population[7]. We propose that by increasing the presence of lactic acid in the vaginal microbiome, there will be increased growth of lactic-acid forming bacteria, thereby decreasing the incidence of recurrent BV and yeast infections. In order to investigate this, we hope to study the effects of the lactic-acid containing vaginal gel, Phexxi, on the composition of the vaginal microbiome. Based on a review of the available literature, we will have participants insert the Phexxi insert and gel two times per week for 4 weeks.[10]

Phexxi is an intravaginal therapy containing lactic acid, citric acid, and potassium bitartrate. It is FDA-approved as a contraceptive agent, but is currently in product-funded studies for use as treatment for bacterial vaginosis, as well as a preventative agent for gonococcal and chlamydial infections.

3. <u>Preliminary studies:</u>

The existing research on lactic acid-containing gel is promising. Of all studied methods of vaginal delivery of lactic-acid, including a douching system, a slow-release delivery pessary, lactic acid capsules, and a lactic acid-containing gel, the lactic acid-containing gel seems to be most effective. One study shows that the use of lactic acid gel as a treatment for bacterial vaginosis is comparable, but not superior to, the use of metronidazole[8,9,10]. Currently, no research has been done on lactic acid gel as a prophylactic agent for patients who suffer from recurrent BV and/or yeast infections. This study aims to explore the feasibility and efficacy of a lactic acid-containing gel as prophylaxis against recurrent BV/yeast infections.

While several studies have been done which suggest that, as a treatment, intravaginal lactic acid gel is non-inferior to metronidazole, there have been no studies which explore its potential as a preventative agent. Compared to antibiotic therapies, lactic acid supplementation may be a more cost effective way to prevent BV and/or yeast infections, thereby reducing morbidities related to these conditions in patients who suffer from recurrent infections.

Section II: Criteria for Subject Selection

1. Number of subjects:

We will enroll a total of 22 patients. Using the Viechtbauer et al. method for calculating sample size in pilot studies[11], with a confidence level of 95% and probability of error prevalence estimated to at least 15%, the recommended sample size is 20. To account for exclusions and drop outs (estimated to be 10%), we should enroll a total of 22 patients.

2. Demographics of subjects:

Patients who undergo screening and are found to meet inclusion criteria will be invited to participate in this study.

Inclusion criteria

- Age 18-54
- Female
- Pre-menopausal
- Can speak and read in English
- Displays capacity for informed consent
- Has had 2 or more documented and/or self-reported episodes of symptomatic BV or candida infection in the last year, requiring, over-the-counter or prescription treatment

Exclusion criteria

- Pregnant or trying to become pregnant
- Post-menopausal
- Using NuvaRing device
- A past medical history of kidney disease, recurrent UTI, and/or urinary tract abnormalities
- Current UTI
- Using Phexxi as a contraceptive during the collection period of the study

*Note: NuvaRing is the only medication that will be included in the exclusion criteria. While we will ask all participants to provide a list of medical conditions they have and a list of medications they are currently taking, these will be for the purposes of data analysis, and to account for possible confounders of our data.
*Note: patients do not have to be symptom-free to participate in this study. However, as stated below, if they receive antibiotic/antifungal treatment prior to starting the study, we will ask them to wait 10 days after the completion of the treatment before they collect their first swab, in order to allow for the restoration of their baseline bacterial flora.

3. Vulnerable subjects:
N/A. Pregnancy is listed as an exclusion criteria, and no minors or incarcerated persons will be included in this study.

Section III: Methods and Procedures

1. Study design and methods

This is a single center, prospective trial, which comprises of a pre-post study design will be looking at the vaginal microbiome makeup of participants before and after a four-week course of Phexxi. The primary outcomes will be an increase in lactic acid-forming lactobacilli, as well as a decrease in patient-reported symptoms of vulvovaginitis.

This study will be based at the Queen's Medical Center (QMC), POB1 Suite 1004. Eligible patients will be approached by participating clinicians (all doctors providing care at the 1004 clinic, as delineated in the LOA form) to assess interest in study participation.. The principal investigator will review the weekly schedule for the 1004 clinic and alert the attending physicians of patients who may be eligible for the study based on chart review. A HIPAA waiver will be required for this stage of recruitment, as the principal investigator would otherwise not be accessing these patient's charts. The attending physician staffing the 1004 clinic will ask the flagged patients if they are interested in learning about the study and review general study objectives with patients. If the patient is interested in participating, the research associates will approach the patient to more thoroughly screen, then conduct the informed consent process. Informed consent will be collected from every participant prior to the start of the study.

After obtaining informed consent, the research team will review standardized instructions for using the study medication with the patient and the research associate will provide a take-home kit including all of the study materials, including instructions for collecting each swab (Appendix A) and for returning the samples. Samples will be self-collected by participants at their home at intervals specified in the study instructions. All materials provided to the patient will be pre-labeled with their study ID, protecting each participant's PHI. No collections will take place in-clinic. These materials include all surveys, patient's diary, and all swab vials.

All vaginal swabs must be frozen within 48 hours of collection. As such, the participants will be asked to send their samples within 24 hours in order to give adequate time for delivery to the storage facility and be asked to collect their specimens between Sunday and Thursday so samples can reach the facility during business hours. Freezing will occur at the research site. Each patient's study kit will include a prepaid shipping envelope, which the participant can use to mail or drive their specimen to the research team who will then place it in the freezer until it is ready for analysis.

The first phase of the study will include an assessment and classification of patients' vaginal microbiome prior to receipt of the intervention. To get the best representation of the participant's baseline microbiome, the participant will be asked to collect their baseline swab no sooner than 10 days after menses, as menses-induced changes in the microbiome have been shown to resolve after this time[12]. For similar reasons, if participants are being treated with an acute course of antibiotics or antifungals at the time of recruitment, they will be asked to wait 10 days after the completion of their medication course before collecting their baseline swab. There will be two additional time points for collection: collection 2) at the end of the 30 day intervention, and collection 3) 30 days after completion of the intervention.

Once received at the research site, samples will be stored in a specimen freezer at -80 degrees F until all specimens are received, at which point they will analyzed using NextGen sequencing, a DNA sequencing technology that will identify the genetic makeup of their specimens. This will be done to sequence the genome of the bacteria of the microbiome, not the patient's genetic material. The first phase of the study will also include a survey (Appendix B), which will collect demographic information from each participant, as well as assess patients' current acceptability of a vaginal gel for prophylactic use, their most bothersome symptoms, and how their quality of life is affected by recurrent vulvovaginitis. The specific information collected from each

participant can be found below in Data Analysis. The survey used to measure this will be the Vulvovaginal Symptom Questionnaire (VSQ), which has been validated for the purposes stated above (Appendix C). There will also be an added space in the survey provided for open-ended answers and comments.

Measurement for primary outcomes will be done using two separate methods. In order to assess for the presence of lactic acid-forming organisms before and after the lactic acid gel intervention, NextGen DNA sequencing will be completed on self-collected samples submitted by participants. The analysis of these samples will be performed by Dr. Miller, at an in-house lab run by the UH Maternal Fetal Medicine division. In order to assess for patient-experienced symptoms, survey B (Appendix C) will be administered prior to, immediately after, and 30 days after intervention.

In order to measure our secondary outcome, Survey C (Appendix D) will be administered at collection points 2 and 3.

The intervention will take place on a rolling basis, as patient participation will have no bearing on other participants. The intervention itself will take place over thirty days. 8 pre-filled vaginal inserters with vaginal gel, will be provided to each of the participants with verbal and written instructions for application. Patients will be instructed to use Phexxi twice per week, on the same days every week. Throughout the 30 days, participants will also be asked to keep a diary of events (Appendix E) occurring when they used the product, such as intercourse or menses, as well as record any symptoms or side effects they noticed when using the product. The diary can be sent back with the second specimen vial. Disposal of the product may be done in a regular waste basket.

Approximately 30 days after completion of the intervention, participants will receive an email reminder to collect and send a third collection swab in (Appendix G) for analysis. This email will also include the link for the third and final set of surveys (B and C).

2. Data analysis and monitoring (include adverse event reporting procedures)

The pre-and post-intervention results will be compared with the subjects to serve as their own controls in this pilot study. To assess for the primary outcomes, each bacteria identified in the NextGen analyses of the composition of the pre-intervention microbiome sampling will be individually named, then classified as either “lactic acid-forming (LAF)” or “not lactic acid-forming (NLF)”. This will allow us to identify which CST each participant falls under prior to the study, and to assess if they can be classified under a different CST at the end of the study. It also allows us to conduct an independent t-test to test for significance between two variables (LAF/NLF) pre and post-intervention.

Demographic data will be collected from patient surveys. Demographic information to be collected will include age, ethnicity, number of reported vaginal yeast infections or BV infections in the last year, type of contraception used, type of diet, and medical comorbidities/current medications. This demographic information will allow us to perform a multiple regression analysis on our data set to account for confounding factors in our study population.

Survey B, completed at the first, second and third collection time points will assess the symptom profile of each patient. Survey B is modified version of the VSQ (vulvovaginitis symptom questionnaire, which is a validated tool used to assess vulvovaginitis symptoms. A blank space will also be provided to allow for free text answers. These answers will be assessed qualitatively, looking for key themes within the answers provided.

To assess for the secondary outcome, Survey C, delivered at the second and third time point, will ask the patient what their satisfaction and acceptability ratings for Phexxi use as a prophylactic agent for vulvovaginitis are. Survey C is a validated tool, used to measure the acceptability, appropriateness, and feasibility of an intervention. A blank space will also be provided to allow for free text answers. These answers will be assessed qualitatively, looking for key themes within the answers provided.

3. Data storage, security, and confidentiality:

Patient information will be de-identified and connected to a unique Study ID. All identifiable information will be stored in a password protected and encrypted computer in the PI's research office at QMC, which is secured at the 1004 clinic. The signed consent forms will also be stored at the 1004 clinic, in a folder located in a locked office. Only the PI and Dr. Kaneshiro will have access to the identifiable information. Dr. Miller, who will be performing analysis using specimens prelabeled with the study ID, will not have access to participant PHI.

If participants opt, in their initial consent, to receive a copy of their vaginal microbiome results, the results will be sent to them via email, using a QMC email address. In order to encrypt this email, the function [encrypted] will be placed in the subject line.

4. Transition from research participation (if applicable): – Not applicable

5. Study timeline:

As the participation of subjects is not directly reliant on one another, data collection will begin as soon as the first subject is enrolled, and will continue until 30 days after the last subject completes the intervention. We hope for the total timeline to be approximately 1 year, which allow for time for data analysis and write-up of the intervention results.

Section IV: Risk/Benefit Assessment

1. Risk category (Minimal or Greater than Minimal): This study poses minimal risk to the patient.

2. Potential risk(s):
    a. There is minimal risk that the privacy of the patient's medical information could be breached.
    b. There is slight risk that participants could experience side effects from the intravaginal Phexxi, as listed in the drug information in Appendix F). However, as lactic acid is a substance that typically resides in the vagina, the likelihood of serious side effects from inserting it vaginally is low.

3. Protection against risk(s):

Please see Section III, #3 above regarding protection of patient's medical information. Regarding side effects of Phexxi, the patient will be adequately counseled on the side effect profile of the treatment, and instructed to discontinue the intervention if these side effects occur and are intolerable to the patient.

If participants develop side effects, the following will take place:

- The patient will be told to discontinue the study drug, and will be withdrawn from the study. This adverse event will be reported to the RIRC.

- If the patient marked on the ICF that they would like their primary Gyn provider to be notified in the case of an adverse event, the research team will send a secure chat message (through the EMR) the patient's primary provider.
- A follow-up visit will be scheduled with the patient to ensure that the unused study drug is returned to the research team
- The patient will be responsible for seeking care from their provider, and using their insurance plan to cover the costs of any treatment required.

4. Potential benefit(s) to the subject (direct medical benefit(s)):

The direct benefit to the subject includes potential prevention and resolution of their recurrent vulvovaginitis symptoms. Additionally, the Phexxi intravaginal gel is primarily used as a contraceptive agent, and thus if the treatment is used prior to intercourse, the patient will benefit from the contraceptive effects of the treatment.

5. Alternative to participation:

Declining participation will not affect patients' medical care, as patients will not be declined the standard of care treatment for BV or yeast infections, which are antibiotics or anti-fungal agents, respectively.

Section V: Subject Identification, and Consent/Assent

1. Method of subject identification and recruitment:

Patients of the 1004 clinic who have been seen two or more times in the past year for recurring symptoms of vulvovaginitis will be screened for this study. In addition, informational posters will be put up in clinic offices in order to invite patients who are interested in the study to undergo screening for suitability of participation.

2. Process of consent:

Each week, the principal investigator will review the records of patients scheduled for appointments in the 1004 clinic for eligibility. These patients will be informed about the study during their visit, and if interested, a research team member will perform a thorough analysis for eligibility. Researcher or research associate will approach patients who are screened as eligible to enroll in the study. A standard, IRB-approved consent form will be used. The consent form will be reviewed, explaining the nature and purpose of the study, intervention and tasks associated with participating, as well as all risks and benefits associated with participation. Research associates can answer questions about the study and complete informed consent. If questions are outside of research associates' scope , then physicians will be available to answer these questions. If enrolled, patients will be provided a signed copy of the consent form.

3. Subject capacity assessment procedures: Not applicable

4. Subject/Representative comprehension:

Patient must be able to understand and communicate effectively in English. As part of obtaining informed consent, patients must be able to demonstrate comprehension of the risks and benefits of study to the researcher. If they are unable to do so using basic English, they will not be deemed appropriate for participation in this study.

5. Debriefing procedures for non-disclosed information (if applicable): not applicable

6. Documentation of consent/assent:

An IRB-approved consent form will be used to document consent. Subjects will be provided with a copy of the consent form. A copy of the signed consent form will be scanned into the subject's medical record.

7. Costs to the subject: No monetary cost will be incurred by the subject, unless the patient develops side effects to the study drug and needs to seek medical attention for these side effects. As stated above, if this occurs, the patient will be responsible for using their insurance plan to cover the costs incurred.

8. Payment for participation: Patients will be compensated a total of $20. They will receive $10 after sending their baseline sample in. They will receive the second installment of $10 after completion of the 3rd collection point and survey. In addition, every participant will have access to the NextGen analysis of her vaginal microbiome, as well as the CST they are categorized to. . The participant will be advised of this option and asked if they would like to have their report sent to them via email. This report will include an interpretation of the results in lay-language and instructions for who to contact if they have questions.

9. Study costs: The study costs will be covered by the UH Foundation's Sharma Fund, who have generously provided a $11,000 grant to cover costs for participant remuneration, the study drug Phexxi, and NextGen sequencing. The drug will be purchased at cost by the research team, and additional funding was secured in order to cover this (the new cost estimate, $11,000, reflects this change). No new equipment will be purchased to complete the analyses, but each analysis does require supplies that incur costs.

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APPENDICES

Appendix A: Patient instructions for specimen collection

INSTRUCTIONS FOR SPECIMEN COLLECTION

1. Peel open the swab package. Remove the swab. Do not touch the soft tip or lay the swab down.
2. Hold the swab, placing your thumb and pointer in the middle of the swab shaft covering the score line. Do not hold the swab shaft below the score line. 3.
3. Carefully insert the swab into your vagina, about 2 inches (5 cm) past the vaginal opening, and gently rotate the swab for 10 to 30 seconds. Make sure the swab touches the walls of the vagina so that moisture is absorbed by the swab and then withdraw the swab without touching the skin.
4. While holding the swab in the same hand, unscrew the cap from the tube. Do not spill the contents of the tube. If the contents are spilled, contact the research team for a new collection tube.
5. Immediately place the swab into the transport tube so that the score line is at the top of the tube.
6. Carefully break the swab shaft at the score line against the side of the tube.
7. Immediately discard the top portion of the swab shaft.
8. Tightly screw the cap onto the tube.

Appendix B Patient demographic survey

Demographic Survey

Subject ID:

1: What is your age?:

2: What is your race?

3. Are you Hispanic/Latinx?

4.: How many yeast infections or episodes of bacterial vaginosis (BV) have you had in the last year?

5: Are you on any kind of birth control? If yes, what kind?

6: In the next portion, please describe what kinds of food you normally eat in a typical day. In addition to meals, please include snacks. If you are currently on a specific type of diet, please state that here.

Breakfast

Lunch

Dinner

Other

7 What other medical conditions have you been diagnosed with? If none, please write, “none”.

8: Please list any medications/supplements you are currently taking. If none, please write, “none”.

Appendix C. Survey to assess vulvovaginitis symptoms. Modified version of the Vulvovaginitis Symptom Questionnaire (VSQ)

During the past week, have you been bothered by:
1. Your vulva itching? 0 ☐ No 1 ☐ Yes
2. Your vulva burning or stinging? 0 ☐ No 1 ☐ Yes
3. Your vulva hurting? 0 ☐ No 1 ☐ Yes
4. Your vulva being irritated? 0 ☐ No 1 ☐ Yes
5. Your vulva being dry? 0 ☐ No 1 ☐ Yes
6. Discharge from your vulva or vagina? 0 ☐ No 1 ☐ Yes
7. Odor from your vulva or vagina? 0 ☐ No 1 ☐ Yes
8. Worry about your vulvar symptoms? (for example, that it will spread, get worse, scar, etc.) 0 ☐ No 1 ☐ Yes
9. The appearance of your vulva? 0 ☐ No 1 ☐ Yes
10. Frustration about your vulvar symptoms? 0 ☐ No 1 ☐ Yes
11. Embarrassment about your vulvar symptoms? 0 ☐ No 1 ☐ Yes

12. The effects of your vulvar symptoms on your interactions with others? 0 ☐ No 1 ☐ Yes
13. The effects of your vulvar symptoms on your desire to be with people? 0 ☐ No 1 ☐ Yes
14. Your vulvar symptoms making it hard to show affection? 0 ☐ No 1 ☐ Yes
15. The effects of your vulvar symptoms on your daily activities? 0 ☐ No 1 ☐ Yes
16. Your vulvar symptoms affecting your desire to be intimate? 0 ☐ No 1 ☐ Yes
17. Are you currently sexually active with a partner?
☐ No→ Thank you. You are done with this questionnaire.☐ Yes→ Please proceed with the next 4 questions
18. The effects of your vulvar symptoms on your sexual relationships? 0 ☐ No 1 ☐ Yes
19. Your vulvar symptoms causing pain during sexual activity? 0 ☐ No 1 ☐ Yes
20. Your vulvar symptoms causing dryness during sexual activity? 0 ☐ No 1 ☐ Yes
21. Your vulvar symptoms causing bleeding during sexual activity? 0 ☐ No 1 ☐ Yes

Please use the space below to list any vulvar/vaginal symptoms you are experiencing which have not already been listed.

Appendix D – Survey used to measure intervention acceptability, appropriateness, and feasibility
Acceptability of Intervention Measure (AIM)

For the statements below, please circle or place a check by all the choices which apply to you

1) Phexxi meets my approval.
2) Using Phexxi is appealing to me.
3) I like using Phexxi.
4) I welcome Phexxi as a way to prevent my recurrent BV/yeast infections.
Intervention Appropriateness Measure (IAM)
1) Phexxi seems fitting to use as a prevention tool against BV and yeast infections.
2) Phexxi seems suitable to use as a prevention tool against BV and yeast infections.
3) Phexxi seems applicable to use as a prevention tool against BV and yeast infections.
4) Phexxi seems like a good match to use as a prevention tool against BV and yeast infections.
Feasibility of Intervention Measure (FIM)
1) Using Phexxi seems implementable.
2) Using Phexxi seems possible.
3) Using Phexxi seems doable.
4) Phexxi seems easy to use

In the space below, please share any additional comments you have about your experience using Phexxi

Appendix E Patient symptom diary
Subject ID

DATE	TIME		Was the product used today?	Side effects or symptoms experienced	Other events (example: menstruation, intercourse, new medications)

Please return this diary with your second collection specimen, 30 days after you have completed the study drug.

Appendix F:

Table (taken from the Phexxi product information page) displaying the most reported adverse effects experienced after Phexxi use

Table 1. Adverse Reactions that Occurred in ≥ 2% of Subjects Who Used PHEXXI to Prevent Pregnancy (Studies 1 and 2 – U.S. population only)

Adverse Reaction	PHEXXI (N=2480) (%)
Vulvovaginal Burning Sensation	18.0
Vulvovaginal Pruritus	14.5
Vulvovaginal Mycotic Infection*	9.1
Urinary Tract Infection†,‡	9.0
Vulvovaginal Discomfort	9.0
Bacterial Vaginosis	8.4
Vaginal Discharge	5.5
Genital Discomfort	4.1
Dysuria	3.1
Vulvovaginal pain	2.1

* Includes preferred terms (PT) vulvovaginal mycotic infection and vulvovaginal candidiasis.
† Includes PTs urinary tract infection, streptococcal urinary tract infection, Escherichia urinary tract infection, and urinary tract infection bacterial.
‡ Does not include PTs cystitis, kidney infection, and pyelonephritis [see *Warnings and Precautions (5.2)*].

Appendix G: Reminder email

Hello (name),

Thank you for your participation in our research study on how Phexxi can change the vaginal microbiome. It has now been approximately 30 days since you completed your course of Phexxi. It is now time for you to submit your last swab to us. Please follow the instructions provided in the pre-packaged envelope to obtain an

adequate specimen collection. As a reminder, these specimens must be sent to us within 24 hours of collection.

Additionally, please fill out the attached surveys in order to complete this study. On receipt of your completed surveys and your final swab, I will send you your $10 remuneration. Additionally, if you originally indicated that you would like a copy of your results, I will send those to you via email once the analysis of data has been completed.

Thank you again for your time and hard work!

Best Regards,
Olivia