

# VMMC

## Pain-O-Meter Redesign Project

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# Project Objective

To design a tool that addresses fear of pain as a key barrier to voluntary medical circumcision (VMMC) uptake among adult men.



# Process Overview



**Research**



**Ideation**



**Testing**



**Refinements**



**Final  
Concept**



**Moving  
Forward**



**Research**



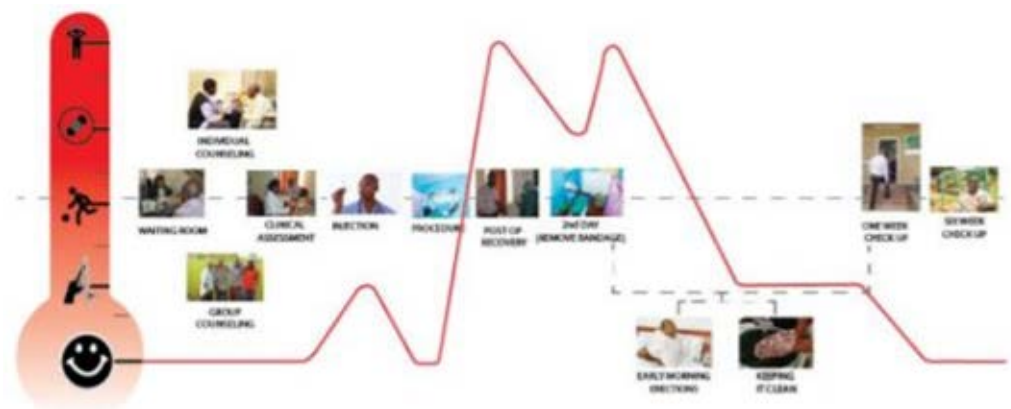
## VMMC + Current Model

The first step in the team's research was understanding VMMC and how mobilizers are currently explaining pain.



# Current Model

The current Pain-O-Meter (used in Zimbabwe and Zambia) uses pain analogies at each phase of the process. However, there is a disconnect between the anticipated pain and the actual experienced pain. By creating a more comprehensive yet still simple pain model we can eliminate lack of knowledge and fear of the unknown.





# Journey Mapping







# Mobiliser Discussions



**Motivation**  
Motivated by the  
benefits



**Common Jobs**  
Farmers, Businessmen,  
Bike & Taxi Drivers



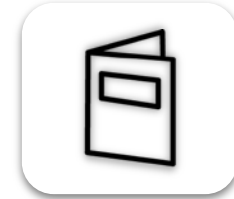
**Explaining Pain**  
Men want to know  
procedure pain & effects  
of pain



**Pain Expectations**  
Pain was expected or  
less compared to  
previous pain



**Most Painful Stage**  
Bandage removal  
repeatedly mentioned  
over erection pain



**Current Guide**  
Information is  
sufficient

# Mobiliser Feedback

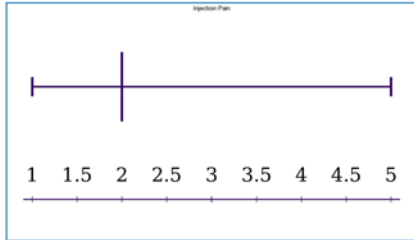


## Injection

(1-5)

Median: 2

Mean: 2.25

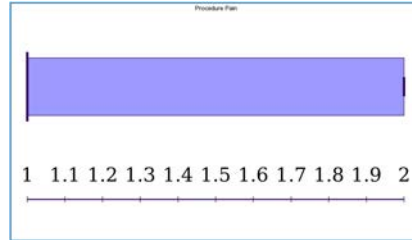


## Procedure

(1-2)

Median: 1

Mean: 1.38

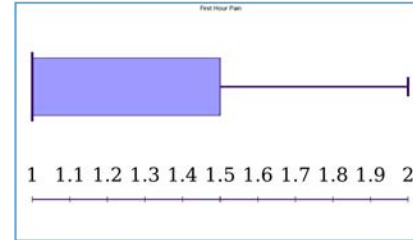


## First Hour

(1-2)

Median: 1

Mean: 1.25

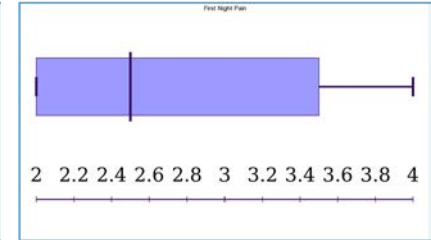


## First Night

(2-4)

Median: 2.5

Mean: 2.75

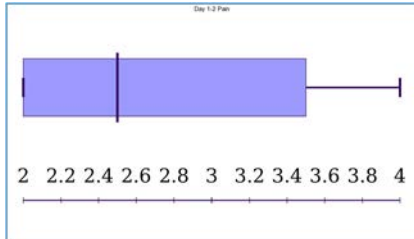


## Day 1-2

(2-4)

Median: 2.5

Mean: 2.75

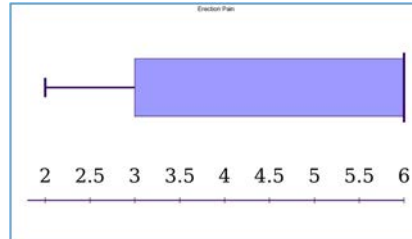


## Erection

(2-6)

Median: 6

Mean: 4.71

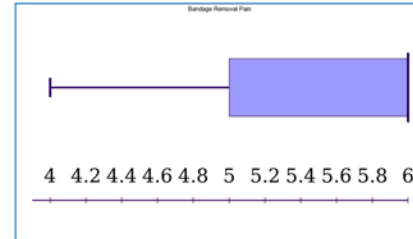


## Bandage Removal

(4-6)

Median: 6

Mean: 5.5

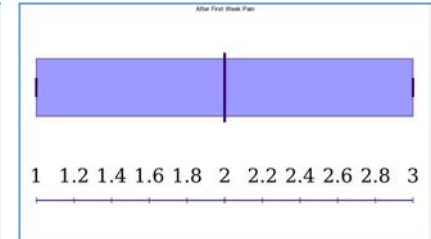


## After First Week

(1-3)

Median: 2

Mean: 2



1-No Pain 2-Minimal/Little Pain 3-Bearable Pain 4-Moderate Pain 5-Painful 6-Terrible Pain



**Ideation**



## Design Criteria

Based on the research and mobiliser discussions, the team crafted design criteria that the designs should consider to ensure success.

# Design Criteria



## Must

Explain procedure pain + effects on recovery/daily activities

Simple to Use + Easy to Understand

## Should

Encourage men to continue with VMMC

Manage expectations/anticipation of pain

Be applicable to most countries

## Nice to Have

Visuals, words, numbers

Segmentation by age/occupation

## Attributes

Encouraging, comprehensive, user-friendly, simple



## Design Question:

*“During mobiliser discussions,  
how can we **motivate + reassure**  
men in order to overcome the fear  
of VMMC pain?”*

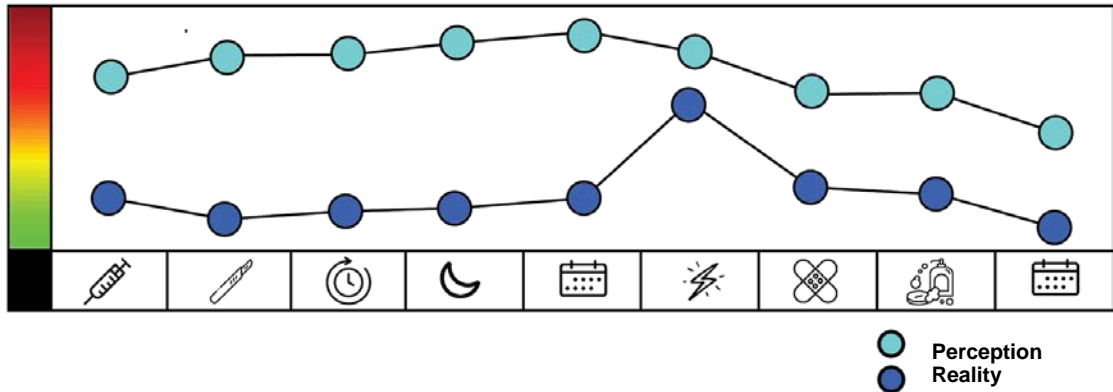


## Phase 1

The design team presented 7 initial models. The purpose of this phase is to identify elements of each model that could move forward and even combine with each other.



## Perception vs. Reality



### PRO

- Combats false/amplified perceptions
- Comparative to reduce fear
- Shows pain journey

### CON

- Potential to create anxiety if man never had false/amplified perception

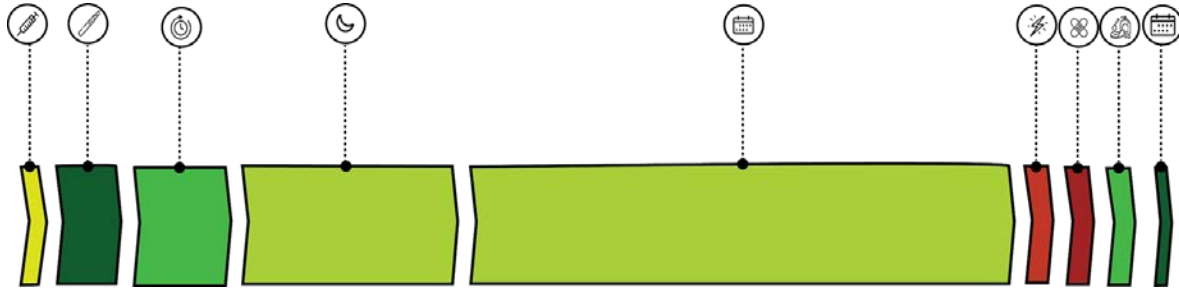
### Team Feedback:

- Worries about creating unnecessary fear
- Graph difficult to understand





## Pain Duration Meter



\*icons are placeholders

### PRO

- Shows duration of time and associated pain
- “Little pain outweighs momentary pain”

### CON

- Color choice is a subjective choice based on average pain described

### Team Feedback:

- Length of time needs to be defined
- Bar format is hard to understand



## PRO

- Personal experience humanizes the tool
- Gives men ability to better comprehend pain
- Ability to segment by age/occupation

## CON

- Problem of varying pain thresholds
- Color choice is a subjective

## Team Feedback:

- Helps to hear other peoples stories
- Model 1-3 friendly appearance
- Need text with icons
- Colors easy to understand

### Meet Vincent.

Let me share my personal experience regarding the pain..(need to reword)



| Vincent Quotes | INJECTION  | PROCEDURE  | FIRST HOUR   | FIRST NIGHT   | DAY 1& 2  |
|----------------|--|--|--|---|---|
|                | <br>"I felt little to moderate pain"  | <br>"I did not feel any pain because the injection numbs you"                                       | <br>"I felt little to no pain any the first hour" | <br>"I felt little pain the first night but it was bearable" | <br>"I still felt little pain but it was bearable" |
|                | <br>"I felt pain during morning erection"(Give insight how to calm problem) | <br>"The bandage removal was the most painful part but they gave pain killers to decrease the pain" | <br>"I felt little pain"                          | <br>"At the end of the first week I felt no pain"            |   |

\*icons are placeholders



## PRO

- Personal experience feedback humanizes the tool
- Able to see how in the grand scheme of things, the process is not painful

## CON

- Graph could set unrealistic or misleading expectations
- High pain level of erections and bandage removal can be intimidating

### Team Feedback:

- Medical looking
- Remove percentages and graphs





## PRO

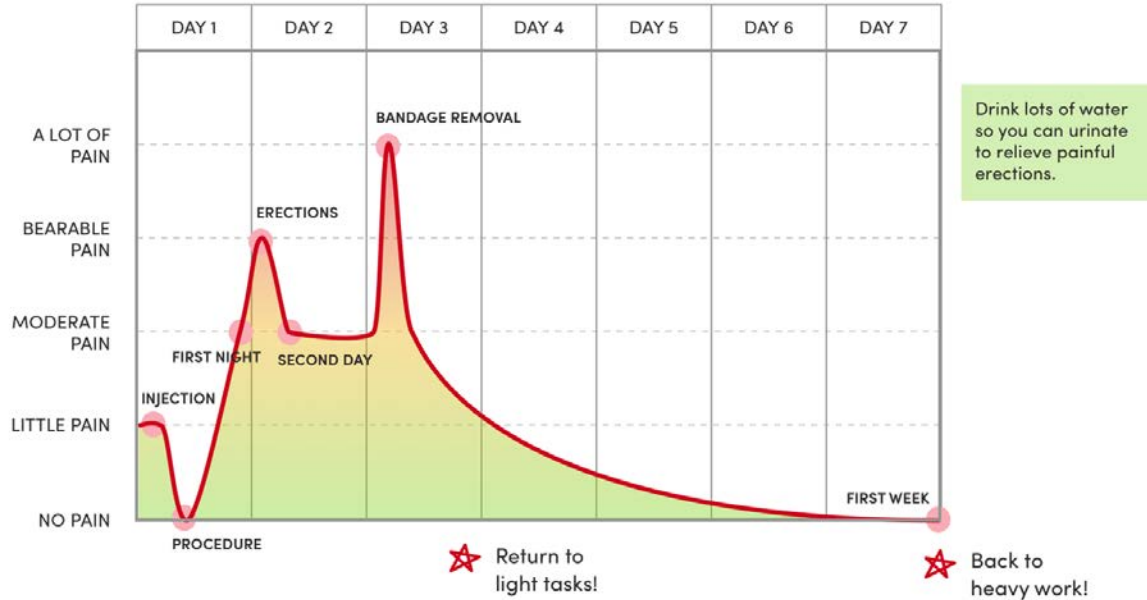
- Personal voices humanize the tool
- Able to address concerns

## CON

- Perception of pain is different for everyone
- Could be viewed as overly simplified

## Team Feedback:

- Tips help show pain is not as bad as expected



## PRO

- Pain scale using relative words is more understandable
- Emphasis on life events like returning to work

## CON

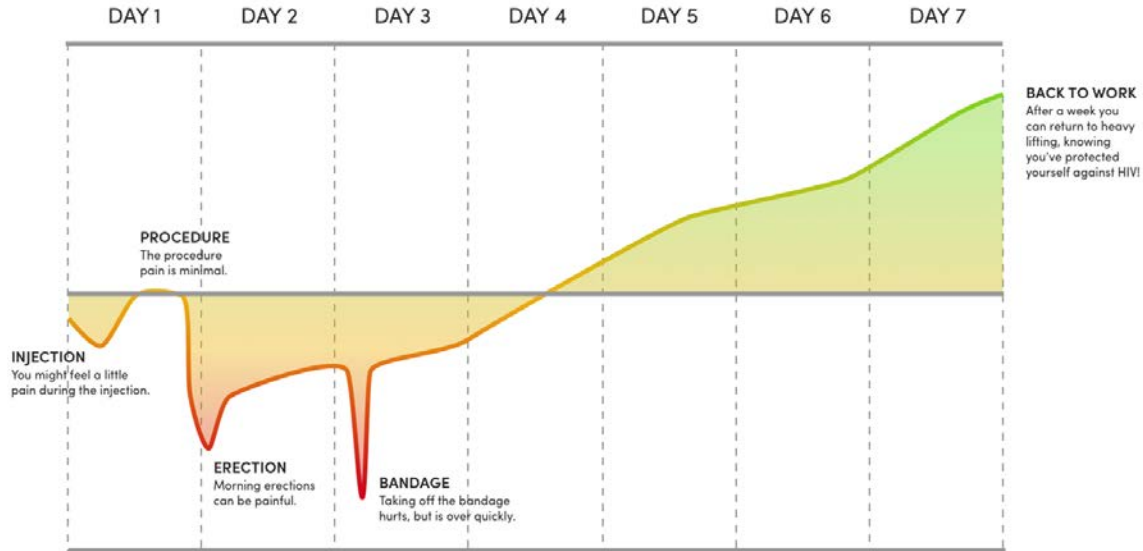
- Text-heavy; POIs could be replaced with icons

## Team Feedback:

- Graph is intimidating and medical looking
- Likes milestone markers



## HOW WILL I FEEL?



## PRO

- Shows positive emotional state after recovery
- Less text heavy by focusing on key points

## CON

- Very generalized
- Less info about pain, the main concern according to interviews

## Team Feedback:

- Graph is intimidating and medical looking

# Other Considerations

- Tool should be immediately intuitive, if they see a graph they won't relate well. The majority have lower education levels so they need to easily understand.
- Erections are ongoing but get better over time - this should be shown.
- A milestone to add is soccer, since it is a common activity for these men.



## Phase 2

The design team generated another round of models to present to the team based on the feedback from the first phase.



## My VMMC Experience



### Mobiliser Script

"Hello my name is Vincent and I will share with you my personal experience with the procedure and post recovery of VMMC. I started my journey when I was 32 years old and got circumcised. The first step is getting the."

### Vincent's Script



#### INJECTION

"When the provider gave me the injection, I felt a little bit of pain."



#### PROCEDURE

"I did not feel any pain during the procedure because the injection numbs you."



#### FIRST HOUR

"I felt no pain after the first hour."



#### FIRST NIGHT

"I started feeling a little pain the first night but it was bearable."



#### ERECTION

"I felt pain during the first morning erection."

Tip: My tip for the morning erections is to take the pain killers, those helped decrease the pain.



#### BANDAGE REMOVAL

"The bandage removal was the most painful part but they gave pain killers to decrease the pain."

Tip: The removal only took a couple of seconds so the pain lasted for only minutes.



#### END OF DAY 2

"I still felt little pain but it was bearable."



#### ERECTIONS

"The morning erection pain lessens and becomes bearable as the wound heals throughout the week."

Milestone: By the start of third day, you are able to do light activities, play soccer and bathe.



#### CLEANING WOUND

"I felt little pain when cleaning the wound."



#### DAY 3-7

"At the end of the first week I felt no pain and was able to go back to hard labor work."

Tip: As long as you follow the doctors instructions on caring for the wound, the recovery is not difficult.

Milestone: By the end of the week, you are able to go back to hard labor work.

### Team Feedback:

- Add tip section
- Change biking and soccer milestone to day 7



## My VMMC Experience



## VINCENT'S SCRIPT



**1. INJECTION**  
"When the provider gave me the injection, I felt a little bit of pain."



**2. PROCEDURE**  
"I did not feel any pain because the injection numbs you."



**3. FIRST HOUR**  
"I felt little to no pain any the first hour."



**4. FIRST NIGHT**  
"I felt little pain the first night but it was bearable."



**5. ERECTION**  
"I felt pain during morning erection"  
Tip: My tip for the morning erections is to take the pain killers, those helped decrease the pain.



**6. BANDAGE REMOVAL**  
"The bandage removal was the most painful part but they gave pain killers to decrease the pain."

Tip: The removal only took a couple of seconds so the pain lasted for only minutes.



**7. END OF DAY 2**  
"I still felt little pain but it was bearable."



**8. ERECTIONS**  
"I pain lessens and becomes bearable as the wound starts to heal"

Milestone: By the start of third day, you are able to do light activities, play soccer and bathe.



**9. CLEANING WOUND**  
"I felt little pain."



**10. DAY 3-7**  
"At the end of the first week I felt no pain and was able to go back to hard labor work."

Tip: As long as you follow the doctors instructions on caring for the wound, the recovery is not difficult.

Milestone: By the end of the week, you are able to go back to hard labor work.

## Team Feedback:

- The model incorrectly represents VMMC as a cyclical process



"My name is Vincent, and this is my journey with VMMC."



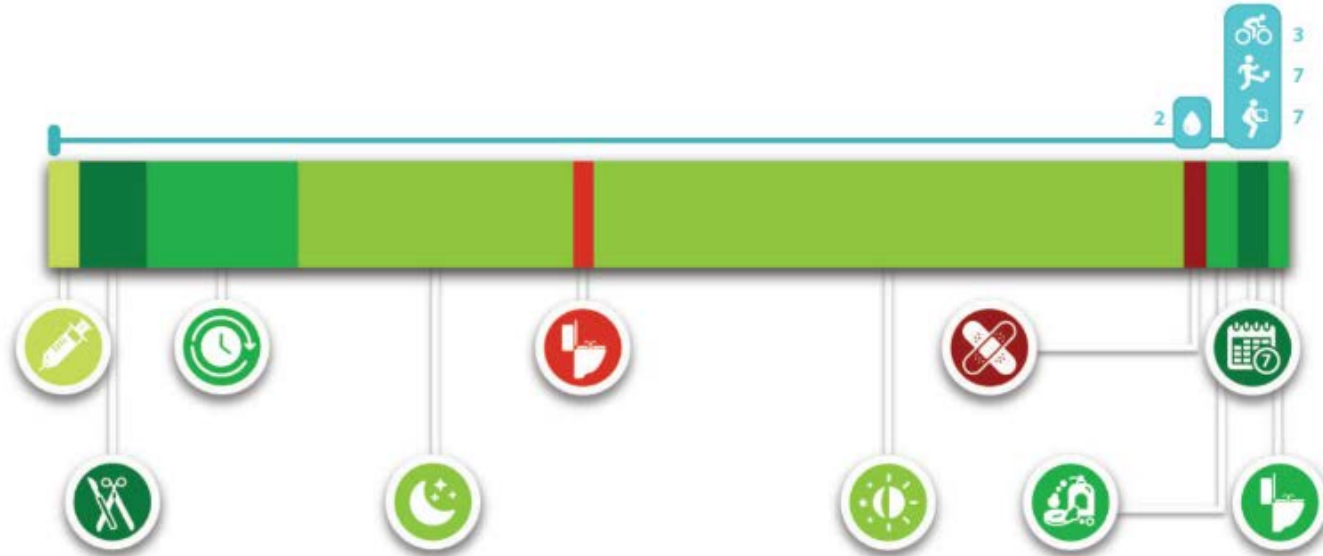
Drink water to urinate and prevent painful erections



Refrain from sexual intercourse for 6 weeks



Use condoms for more protection against STDs.



### Team Feedback:

- Tips portion is helpful
- Change wording of tip section
- Use inset graphs to help with scaling
- Replace toilet icon

# MEET MARSHALL



MARSHALL GOT  
CIRCUMCISED TO  
PROTECT HIS FAMILY.  
Here's what it was like for  
him.

|       |  |   |  |   |
|-------|--|---|--|---|
| DAY 1 | <b>INJECTION</b><br>I only felt a little pain.                           | <b>PROCEDURE</b><br>I didn't feel any pain. The injection numbs you.            | <b>1st HOUR</b><br>I felt very little pain the first hour. | <b>1st NIGHT</b><br>I felt a little pain but it was bearable. |
| DAY 2 | <b>ERECTION</b><br>The morning erection was painful.                     | <b>2nd DAY</b><br>I still felt a little pain but it wasn't bad.                 |  |   |
| DAY 3 | <b>ERECTION</b><br>Peeing helps the erection go away faster.             | <b>BANDAGE REMOVAL</b><br>This was the most painful, but they gave painkillers. |  | <b>SHOWER!</b>  |
| DAY 4 | <b>ERECTION</b><br>I drink lots of water so I can relieve any erections. |   | <b>BACK TO LIGHT WORK!</b>                                 |   |
| DAY 5 | <b>ERECTION</b>  |   |  |   |
| DAY 6 | <b>ERECTION</b>  |   |  |   |
| DAY 7 | <b>ERECTION</b>  | <b>FIRST WEEK</b><br>I felt no pain at the end of the first week.               | <b>SOCCER &amp; HEAVY LIFTING!</b>                         |   |



## Team Feedback:

- Shows erections getting better over time
- Calendar format easy to understand
- Replace "DAY #" with calendar icon



## Phase 3

The design team made minor adjustments to the models from Phase 2 in preparation for user testing.



## My VMMC Experience



"Refrain from sexual intercourse for the next 6 weeks."



"If you follow the doctor's instructions, the recovery is not difficult."



"Painkillers are given to decrease the pain."



"Drinking water helps prevent painful erections."



"The pain was less than what I expected."

\*Shown to man

# Mobiliser Script



"Hello my name is Vincent and I will share with you my personal experience with the procedure and post recovery of VMMC. I started my Journey when I was 32 years old and got circumcised. The first step is getting the.."



## 1. INJECTION

"When the provider gave me the Injection, I felt a little bit of pain."



## 2. PROCEDURE

"I did not feel any pain because the injection numbs you."



## 3. FIRST HOUR

"I felt no pain after the first hour."



## 4. FIRST NIGHT

"I started feeling a little pain but it was bearable."



## 5. ERECTION

"I felt pain during the first morning erection."



## 6. BANDAGE REMOVAL

"The bandage removal was the most painful part."



## 7. END OF DAY 2

"I still felt little pain but it was bearable."



## 8. ERECTIONS

"The morning erection pain lessens and becomes bearable as the wound heals throughout the week."

Tip: Take painkillers to decrease the pain.

Tip: The removal only took a couple of minutes so the pain was short lasting.

Milestone: By the start of third day, you are able to do light activities and bathe.



## 9. DAY 3-7

"At the end of the first week I felt no pain and was able to go back to hard labor work."



## 10. CLEANING WOUND

"I felt little pain when cleaning the wound."

Milestone: By day 7, you are able to go back to hard labor work, bike taxi driving and playing soccer.

\*Only viewed by mobilizer



"My name is Vincent, and this is my journey with VMMC."



Drink water to urinate and prevent painful erections



Refrain from sexual intercourse for 6 weeks



Use condoms to protect yourself against HIV & STDs







# MEET MARSHALL



MARSHALL GOT  
CIRCUMCISED TO  
PROTECT HIS FAMILY.  
Here's what it was like for  
him.

★ TIP: Erections can  
be painful. Drink  
lots of water so  
you can pee to  
help them go  
away.



**INJECTION**  
I only felt a little  
pain.



**PROCEDURE**  
I didn't feel any  
pain. The  
injection numbs  
you.



**1st HOUR**  
I felt very little  
pain the first  
hour.



**1st NIGHT**  
I felt a little pain  
but it was  
bearable.



**ERECTION**  
The morning  
erection was  
painful.



**BANDAGE  
REMOVAL**  
This was the most  
painful, but they  
gave painkillers.



**ERECTION**  
Peeing helps the  
erection go away  
faster.

★ **SHOWER!**



**ERECTION**  
I drink lots of  
water so I can  
relieve any  
erections.

★ **BACK TO LIGHT WORK!**



**ERECTION**



**ERECTION**



**ERECTION**



**FIRST WEEK**  
I felt no pain at  
the end of the  
first week.

★ **SOCCER & HEAVY  
LIFTING!**



**Testing**



## Testing Models

The team sent the three models to Malawi and asked local mobilizers for their thoughts and feedback.



\*Shown to man



- “Very easy to follow”
- “Intuitive... clear and easy to use”
- “Honest and clear” which is calming for potential clients

- “Insight into whole procedure and recovery”
- Shows that “the process is not as painful as they may think”
- “The chat can be difficult to interpret”

- “Vivid picture of how the pain decreases with each passing day”
- “Clearly proves that the healing process is less painful”
- “Long and... may confuse the mobilizer to interpret”



## My VMMC Experience



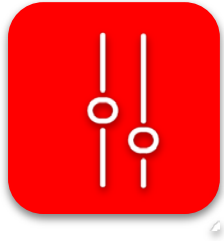
VINCENT

"Refrain from sexual intercourse for the next 6 weeks."  
"If you follow the doctor's instructions, the recovery is not difficult."  
"Painkillers are given to decrease the pain."  
"Drinking water helps prevent painful erections."  
"The pain was less than what I expected."



| MEET MARSHALL    | INJECTION        | PROCEDURE        | FIRST HOUR       | FIRST NIGHT      | ERECTIONS        | BANDAGE REMOVAL  | END OF DAY 2     | ERECTIONS        | CLEANING WOUND   | DAY 3-7          |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Profile picture  | Icon             | Icon             | Icon             | Icon             | Icon             | Icon             | Icon             | Icon             | Icon             | Icon             |
| Text description | Text description | Text description | Text description | Text description | Text description | Text description | Text description | Text description | Text description | Text description |

*"For sure [this model] will encourage men to undergo VMMC and also help mobilizers to explain the pain to the potential client."*



**Refinement**



## Testing Refinements

After receiving user testing feedback, the team decided to move forward with Model 1. We made a few minor adjustments to try to incorporate elements that mobilizers liked from the other models.



## My VMMC Experience



VINCENT

"Refrain from sexual intercourse for the next 6 weeks."

"If you follow the doctor's instructions, the recovery is not difficult."

"Painkillers are given to decrease the pain."

"Drinking water helps prevent painful erections."

"The pain was less than what I expected."

\*Shown to man





## VINCENT: MY VMMC EXPERIENCE



### Added

- Larger picture of Vincent
- Color change to make more cohesive
- Bar gradient to show overall pain experience
- Erection gradient arrow to show better over time



"Refrain from sexual intercourse for the next 6 weeks."



"If you follow doctor's instructions, recovery is easy."



"Painkillers are given to decrease pain."



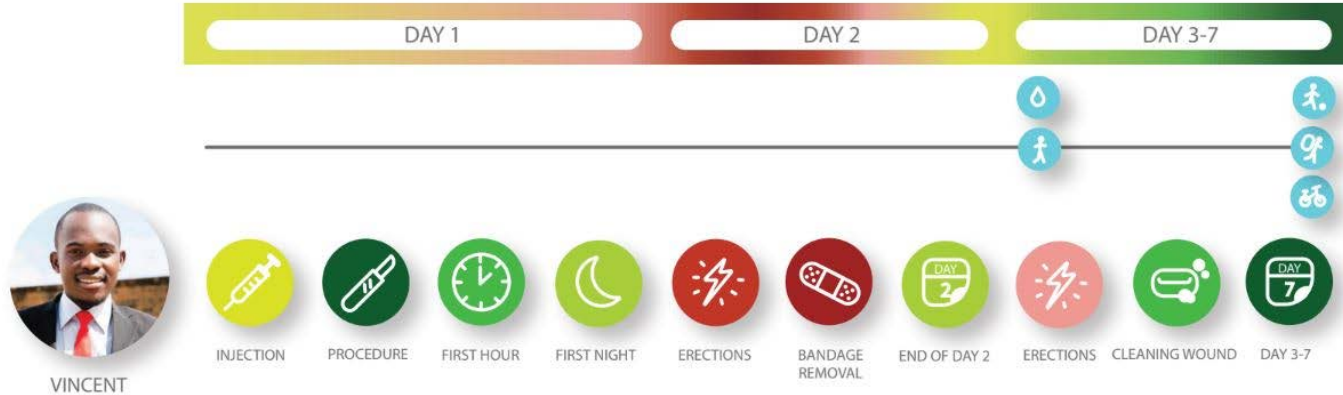
"Drinking water helps prevent painful erections."



"The pain was less than expected."



## My VMMC Experience



### Added

- Color change
- Bar gradient to show overall pain experience

"Refrain from sexual intercourse for the next 6 weeks."

"If you follow the doctor's instructions, the recovery is not difficult."

"Painkillers are given to decrease the pain."

"Drinking water helps prevent painful erections."

"The pain was less than what I expected."



## Synthesis

The team decided to adopt the color and layout changes of the second fine-tuned edit since they were the most cohesive. We also decided to merge the gradient arrow and use the erection graphic from the first fine-tuned edit since it fit better with our visual language.



**Final Concept**

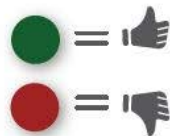


## Overview

The model frames the pain of VMMC through the personal experience of a man named Vincent. Vincent represents an average 27 year old Malawi man who has already been circumcised. The pain described by Vincent came from a compilation of responses given by 8 VMMC mobilisers. The goal of this model is to humanize the tool instead of simply using numbers and relative words, but instead give perspective of the pain through another person's eyes. When the mobilisers use this device, they can say that either they had similar experiences to Vincent or that Vincent represents a handful of mobilisers who were interviewed about the pain/process.



# VINCENT: MY VMMC EXPERIENCE



 "Refrain from sexual intercourse for the next 6 weeks."

 "If you follow doctor's instructions, recovery is easy."

 "Painkillers are given to decrease pain."

 "Drinking water helps prevent painful erections."

 "The pain was less than expected."



# VINCENT'S SCRIPT

"Hello my name is Vincent and I will share with you my personal experience with the procedure and post recovery of VMMC. I started my journey when I was 27 years old and got circumcised. The first step is getting the.."



## 1. INJECTION

"When the provider gave me the injection, I felt a little bit of pain."



## 2. PROCEDURE

"I did not feel any pain because the injection numbs you."



## 3. FIRST HOUR

"I felt no pain after the first hour."



## 4. FIRST NIGHT

"I started feeling a little pain but it was bearable."



## 5. ERECTIONS

"I felt pain during the first morning erection."

"The next morning erection pain is bearable and lessens as the wound heals throughout the week."

Tip: Take painkillers to decrease the pain.



## 6. BANDAGE REMOVAL

"The bandage removal was the most painful part."

Tip: The removal only took a couple of minutes so the pain was short lasting.



## 7. END OF DAY 2

"I still felt little pain but it was bearable."



## 8. CLEANING WOUND

"I felt little pain when cleaning the wound."



## 9. DAY 3-7

"At the end of the first week I felt no pain and was able to go back to hard labor work."

### MILESTONES



By the start of DAY 3, you are able to bathe and do light activities.



By DAY 7, you are able to go back to hard labor work, bike taxi driving and playing soccer.

After 6 weeks, you are able to have sexual intercourse.

\*Only viewed by mobilizer



## Comparing to Original

In comparison to the original Pain-O-Meter used in Zimbabwe and Zambia, the new Pain-O-Meter addresses perception versus reality by using a personal storytelling layout to explain the pain.





# Moving Forward

- Implementation in Malawi and by other interested programs
- Potential for segmentation

# Acknowledgements

CDC-HQ

JHPIEGO-Malawi

CDC-Malawi

Michael St. Louis

# Thank you!

Questions?

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# References

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- <https://www.sciencedirect.com/sdfe/pdf/download/eid/1-s2.0-0049017289900103/first-page-pdf>
- <http://www.npcnow.org/system/files/research/download/Pain-Current-Understanding-of-Assessment-Management-and-Treatments.pdf> (MAIN RESOURCE REFERENCED)
- <https://www.aafp.org/afp/1999/1115/p2299.html>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3992093/>
- <http://www.bbc.com/future/story/20170110-why-pain-is-so-hard-to-measure---and-treat>
- <https://thenounproject.com/>
- <https://luckierethinktank.com/2017/12/healthcare-and-the-patient-journey/>
- <https://www.cynthiamillionis.com/journey-map/>
- [https://www.physio-pedia.com/Numeric\\_Pain\\_Rating\\_Scale](https://www.physio-pedia.com/Numeric_Pain_Rating_Scale)
- <http://wongbakerfaces.org/>
- [http://file.scirp.org/Html/10-1420223\\_41819.htm](http://file.scirp.org/Html/10-1420223_41819.htm)
- [https://www.researchgate.net/figure/Brief-Pain-Inventory-Scale\\_fig8\\_261374786](https://www.researchgate.net/figure/Brief-Pain-Inventory-Scale_fig8_261374786)
- [https://www.physio-pedia.com/Short-form\\_McGill\\_Pain\\_Questionnaire](https://www.physio-pedia.com/Short-form_McGill_Pain_Questionnaire)
- <https://basicmedicalkey.com/assessment-tools/>