

Adherence and  
Drug Resistance  
Explained

## Key Counselling Messages:

- Every time you take your ARVs you top up the amount of ARV there is in your blood
- This daily top up is VERY IMPORTANT to keep the ARV level in your blood HIGH
- Your ARVs will only work well if the ARV level in your blood is kept HIGH

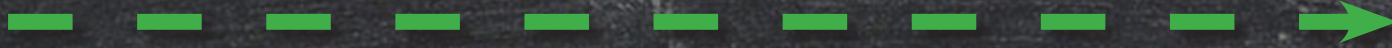
### NOTE:


Some patients who are on ARVs which need to be taken TWICE daily this 'top up' must happen twice every day to keep the ARV level high e.g. if the patient is on Nevirapine, Aluvia or AZT (Zidovudine).

Check what ARVs the patient is on before explaining this slide.

During the counselling session remember to cover that ARVs should not be mixed with traditional medicines due to the risk of drug-drug interactions which may stop the ARVs working well.

HIGH



 ARV drug level in blood

Level in Blood

If you take your ARVs  
**EVERY** day the amount of ARV in  
your blood stays HIGH

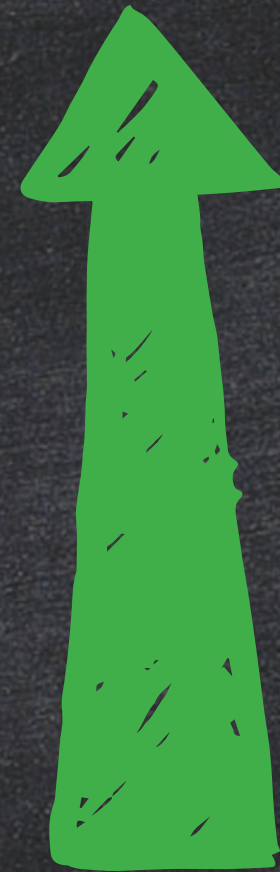
LOW

Time

## Key Counselling Messages:

- When you keep the ARV level in your blood high this pushes the HIV in your body down, controlling it at a very low level
- Keeping the HIV in your body at a low level is very important. This is what stops the HIV from attacking and killing your CD4 (soldier) cells
- A blood test called the VIRAL LOAD is used to check the level of HIV in your body. If you take your ARVs every day then your viral load result should be UNDETECTABLE. An undetectable viral load means there is no active HIV moving around your body causing damage to your CD4 (soldier) cells. An UNDETECTABLE viral load tells us that your ARVs are working 100%.
- On the blood test result an undetectable viral load may be written as 'Lower than detectable limit (LDL)' or '< 40 copies (below 40 copies)'
- An UNDETECTABLE viral load does not mean your HIV is cured – ARVs do not cure HIV.

CD4 (Soldier)  
Count



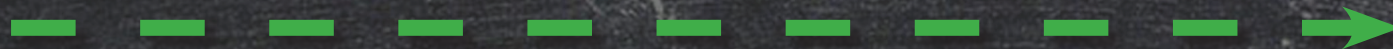
Viral Load  
(HIV Level)



## Key Counselling Messages:

- The lower you keep the HIV level (viral load) in your body, the more your CD4 (soldier) cells will increase
- The higher your CD4 (soldier) count, the less likely you are to become ill from other serious infections.
- However, if you do get sick from another illness, you need to go to your clinic to get treatment. Taking ARVs alone will not treat other infections like STIs and TB.

HIGH



Level in Blood

The HIGH level of ARV in your blood pushes the HIV in your body down, keeping it at a very low level

— HIV level in blood

LOW



Time

## **Key Counselling Messages:**

- If, for any reason, you miss a dose of your ARVs the level of ARV in your blood drops down (decreases)



HIGH

Level in Blood

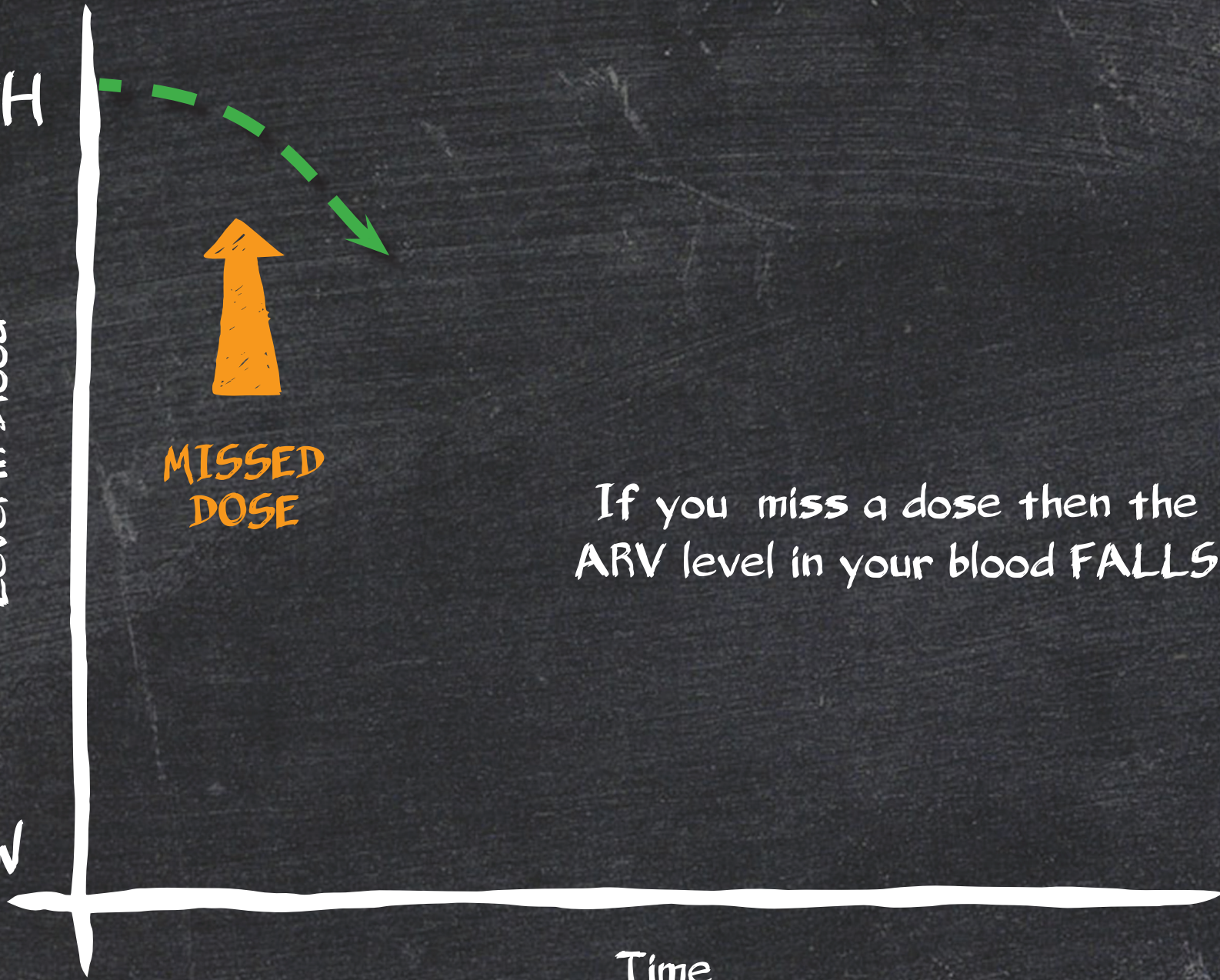


MISSED  
DOSE

If you miss a dose then the  
ARV level in your blood FALLS

LOW

Time



## Key Counselling Messages:

- Without enough ARV in your blood your HIV is given a chance to grow again
- Missing just one day of your ARVs gives your HIV FREEDOM to increase in number
- The more HIV in your body, the more your CD4 (soldier) cells are attacked and weakened

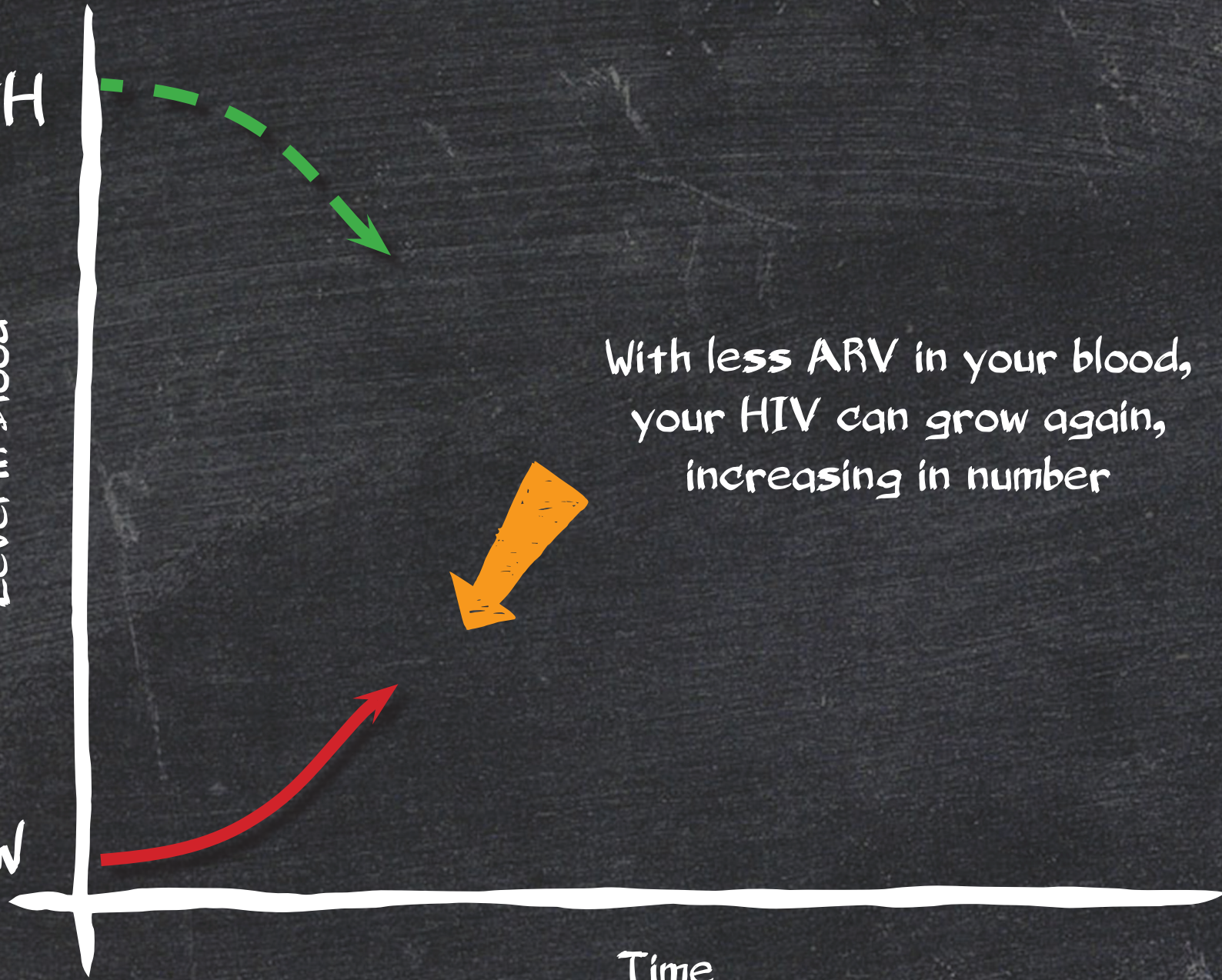
HIGH

Level in Blood

LOW

With less ARV in your blood,  
your HIV can grow again,  
increasing in number

Time



## Key Counselling Messages:

- The next time you take your ARVs the ARV level in your blood slowly goes back up and is able to bring the virus back under control again

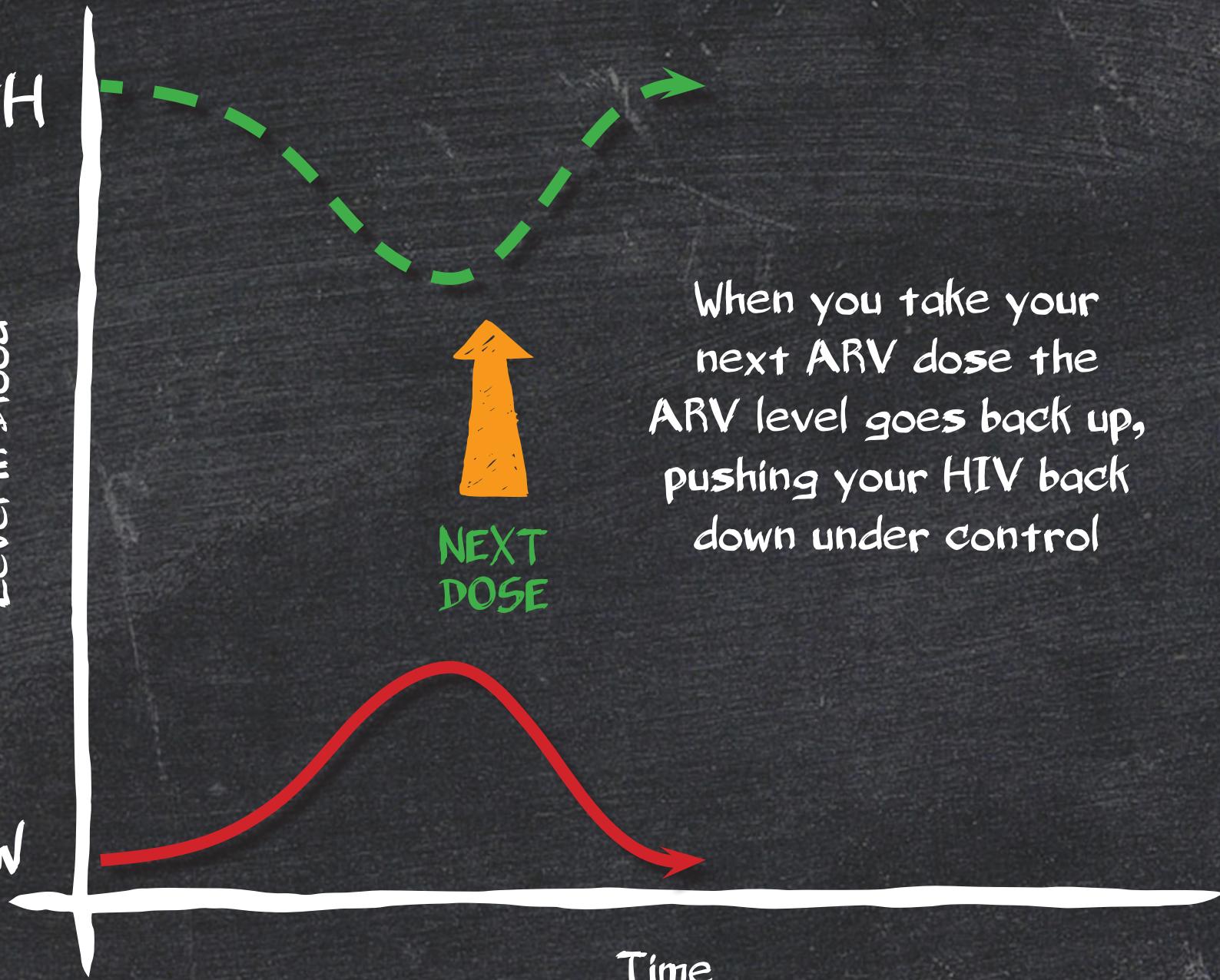
**BUT.....**

HIGH

Level in Blood

LOW

Time



## Key Counselling Messages:

- EVERY TIME you miss or forget to take your ARVs, the ARV level in your blood drops too low and the amount of HIV in your body increases
- With every missed dose the amount of HIV goes up and down...up and down...up and down.
- THIS IS A DANGEROUS SITUATION

HIGH

Level in Blood

MISSED DOSE

MISSED DOSE

Every time you miss your ARVs this pattern repeats - your HIV level goes up and down, up and down.

LOW

Time



## Key Counselling Messages:

- You may want to know why this pattern of HIV going up and down, up and down, is so dangerous.
- There are 2 reasons:
  1. The more HIV in your body, the harder it is for your CD4 (soldier) count to increase. Your body will continue to find it hard to fight off other infections. Your health will not be as good as it could be.
  2. Each time the HIV in your body is given the freedom to increase in number it also grows STRONGER. Every missed ARV dose gives the HIV a chance to get smarter and it learns how to BLOCK your ARVs so that they are unable to work.



HIGH

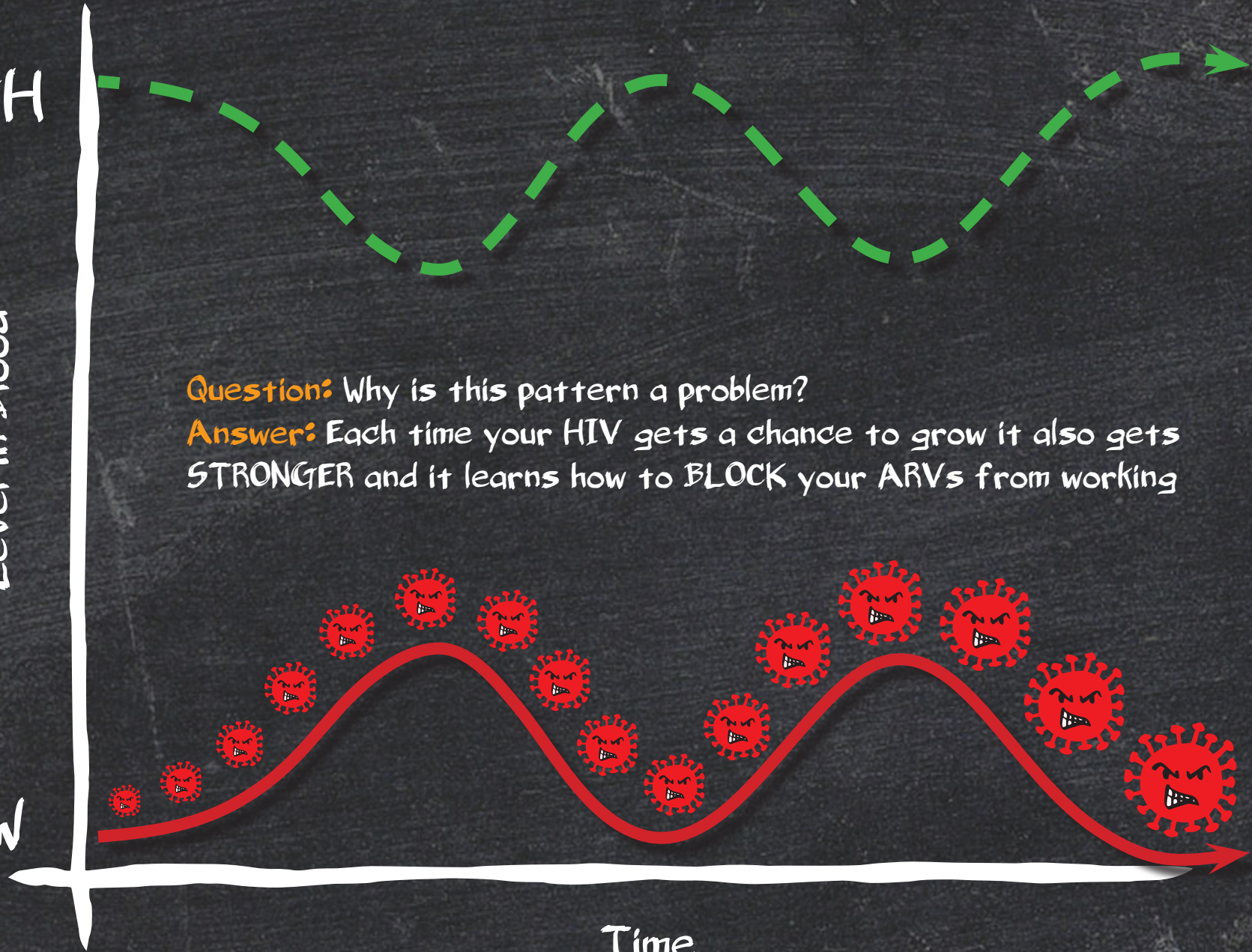
Level in Blood

**Question:** Why is this pattern a problem?

**Answer:** Each time your HIV gets a chance to grow it also gets STRONGER and it learns how to BLOCK your ARVs from working

LOW

Time



## Key Counselling Messages:

- If you miss your ARVs more than once or twice in a month your HIV will grow so strong that the ARVs will no longer work
- If this happens, even if you start to take your ARVs every single day, your HIV will be so strong that the ARVs can't push it down anymore.
- The HIV just keeps growing and growing and growing
- This is what is called RESISTANT HIV

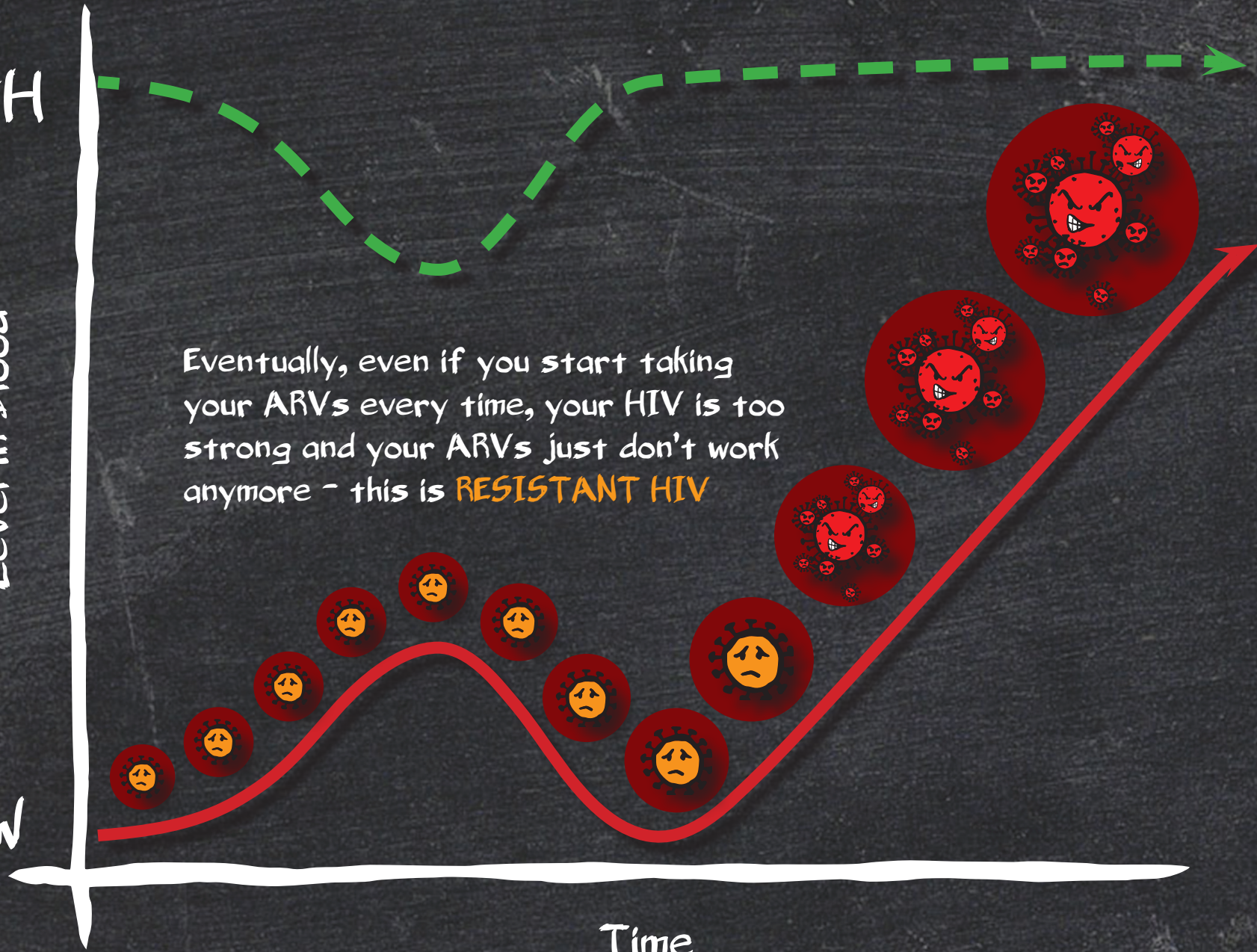
HIGH

Level in Blood

LOW

Eventually, even if you start taking your ARVs every time, your HIV is too strong and your ARVs just don't work anymore - this is **RESISTANT HIV**

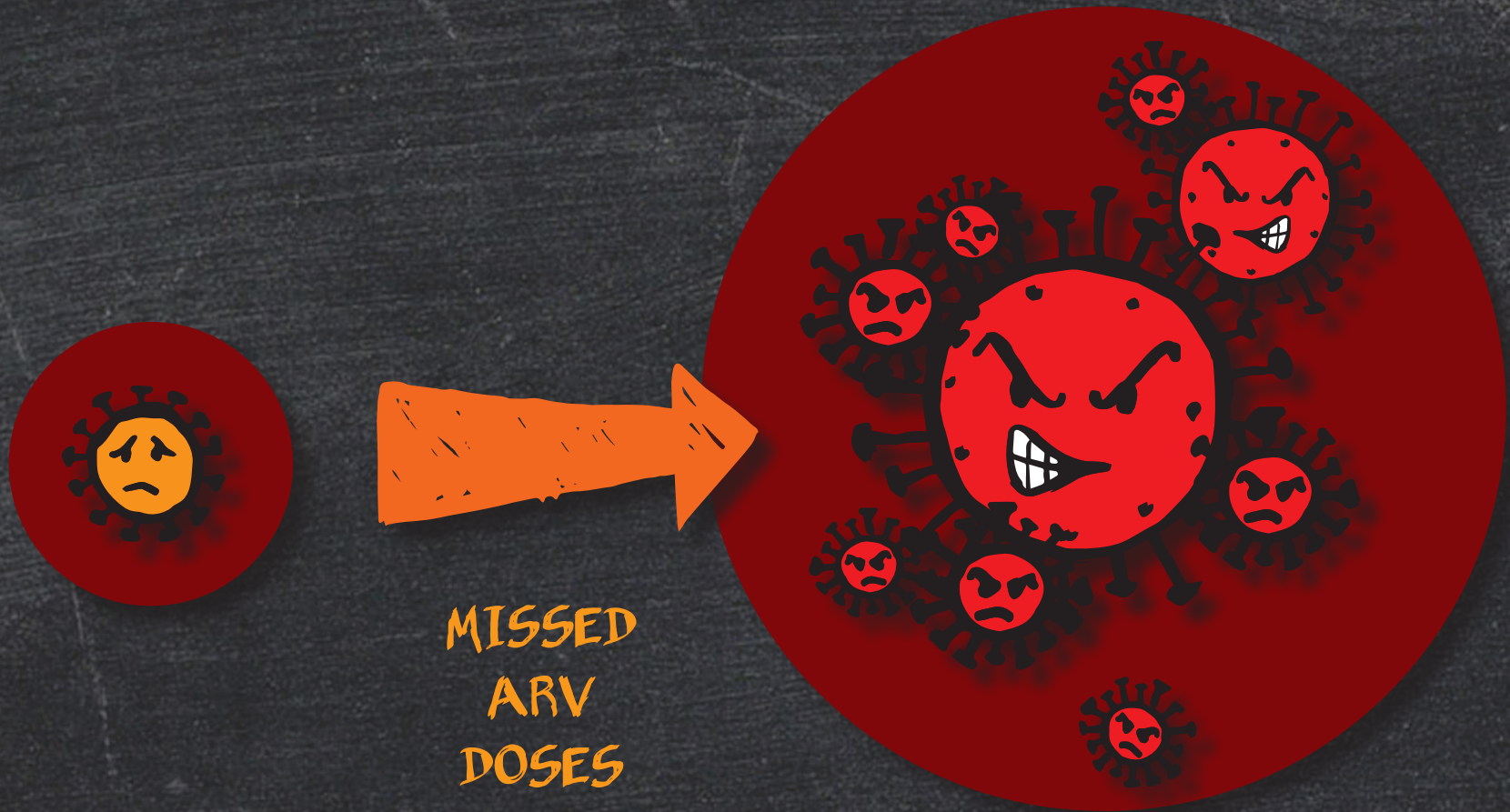
Time



## Key Counselling Messages:

- You do not want your HIV to change from being weak and easy to control to be coming so strong that the ARVs no longer work.
- Make sure you take your ARVs every single day.
- Even missing one or more doses each week may be enough to cause resistant HIV

You do not want this to happen to your HIV



Make sure you take your ARVs EVERY SINGLE DAY

## Key Counselling Messages:

- If your HIV becomes resistant then your nurse or doctor will need to change you to new, stronger ARVs.
- This is called Regimen 2.
- These stronger ARVs will help get your HIV back under control
- HOWEVER, Regimen 2 ARVs are more difficult to take – you will have to take more tablets, twice a day
- Regimen 2 also causes different side effects which may be unpleasant for you
- It is always better to take your first ARVs (Regimen 1) well than to regularly miss doses and end up needing to change to Regimen 2
- IMPORTANT: if you need Regimen 2 you will NEVER be able to go back to Regimen 1 ARVs – they will never work again.

# If your HIV becomes RESISTANT

You will need stronger ARVs to get your HIV back under control

Regimen 1



Regimen 2

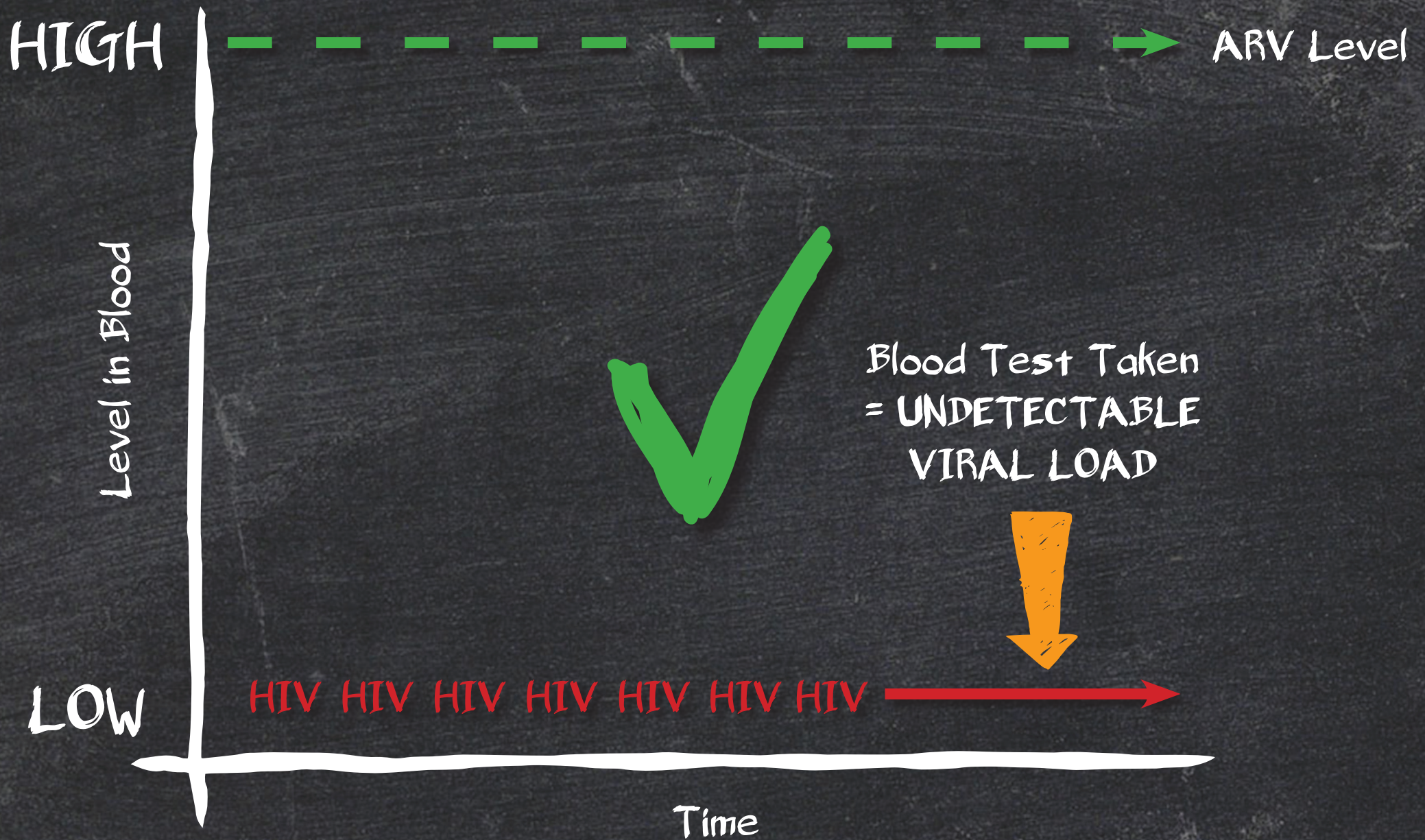


## Key Counselling Messages:

- Remember: Your goal is to keep the ARV level in your blood HIGH so that your HIV is always pushed down to a low level.
- This will keep you healthy AND prevent your HIV becoming resistant.
- When the doctor or nurse checks your blood tests you want to hear that your VIRAL LOAD IS UNDETECTABLE. Then you know your ARVs are working 100%.
- This doesn't mean you are cured, or HIV negative, you still need to take your ARVs everyday for the rest of your life.



Your goal is to keep the ARV level in your blood high ALL THE TIME



This is why it is **SO IMPORTANT** to take your ARV tablets **EVERY DAY**

## Key Counselling Messages:

- Because missing an ARV dose is such bad news, it is very important to know that IF YOU FORGET to take your ARVs at your chosen time it is BETTER TO TAKE LATE than to miss a dose totally.
- IF YOU FORGET your ARVs, and then remember after your time has passed, it is still safe to take up to 4 or 5 hours late.

### Examples:

- Thabo usually takes his ARVs at 8pm. His taxi breaks down and he only gets home at 9.30pm. He can still take his ARVs at 9.30pm.
- Busi takes her ARVs at 6pm. She was very tired and fell asleep in front of the TV. She wakes up again at 10pm. She can still take her ARVs at 10pm and then go to bed.



**IF YOU FORGET**

to take your ARVs at your  
chosen time it is

**BETTER TO TAKE LATE**

than not to take at all.

## Key Counselling Messages:

- If you remember to take your ARVs every single day, every week, every month then the HIV in the your body will not get the chance to grow and become resistant.
- If you can do this your ARVs will continue to work for years and years and years
- You will be able to live a long and healthy life – working, having a family, enjoying birthdays, spending time with friends.
- Do you have any questions?

**Remember:** taking your ARVs **EVERY DAY** keeps your HIV level down AND prevents resistance so your drugs can keep working for years... and years... and years.

