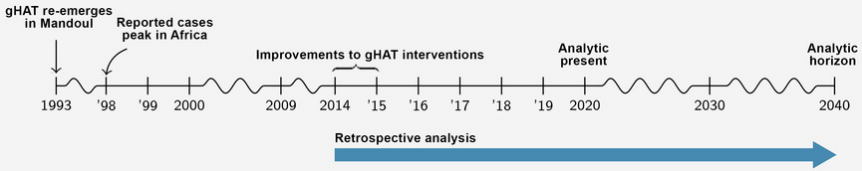
# STRATEGY EFFECTIVENESS TOWARDS THE ELIMINATION OF SLEEPING SICKNESS IN MANDOUL

PUBLICATION SUMMARY

## EFFECTIVENESS OF INTERVENTION IMPROVEMENTS SINCE 2014

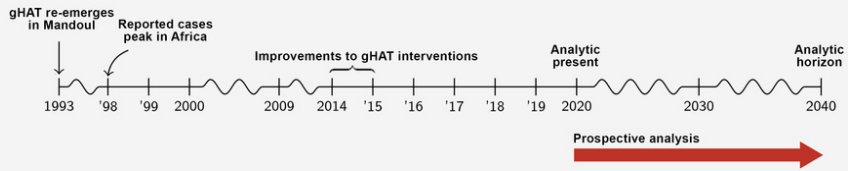
RETROSPECTIVE ANALYSIS




Were intervention improvements since 2014 an effective use of resources and what would the health economic outcomes have been if less ambitious strategies had been implemented?

## EFFECTIVENESS OF FUTURE STRATEGIES

PROSPECTIVE ANALYSIS



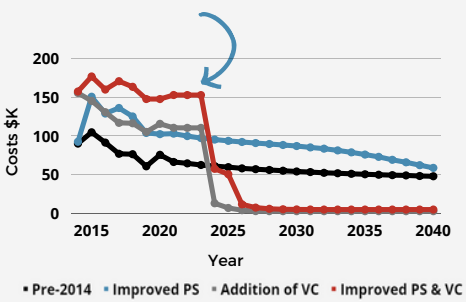

With few remaining cases of sleeping sickness left in Mandoul, what cost-effective interventions could be implemented going forwards from 2023?

## RESULTS

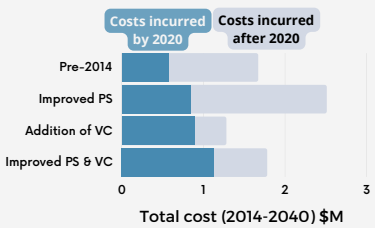
| STRATEGIES CONSIDERED | |
|---|---|
| **Improved PS & VC** | Strategy implemented in Mandoul from 2014 |
| **Improved PS** | Improvement in PS only |
| **Addition of VC** | Improvement in VC only |
| **Pre-2014** | Interventions at levels present before 2014 |

*Vector control = VC, passive screening = PS*

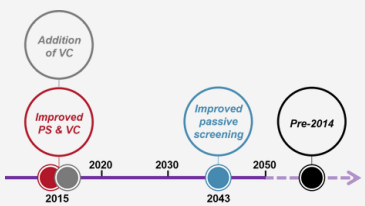
Investment in VC without improving PS **(Addition of VC strategy) was cost-saving by 2040**. Strategies that included VC minimized costs and **those without VC** cost more and **averted less disease burden**:




The strategy with **highest expected total cost** would have been **Improved PS**, driven by the cost of active and passive screening:




Including VC in strategies **substantially decreased transmission and cases** bringing forward the elimination of transmission goal in Mandoul to 2015:

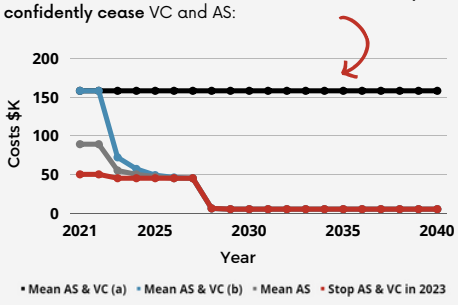



## RESULTS

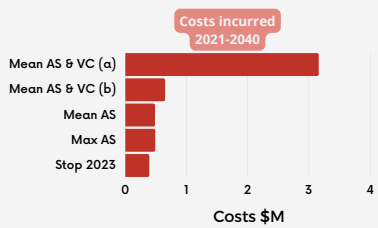
| STRATEGIES CONSIDERED | |
|---|---|
| **Mean AS & VC (a)** | AS and VC cease following no cases for 3 years (AS test specificity = 99.93%) |
| **Mean AS & VC (b)** | AS and VC cease following no cases for 3 years (AS test specificity = 100%) |
| **Mean AS** | Historical mean level of AS (2000 – 2019) |
| **Stop 2023 (No AS or VC)** | Both AS and VC stop from 2023 irrespective of case reporting |

*PS continues at the current level in all strategies*
*Vector control = VC, passive screening = PS, active screening = AS*

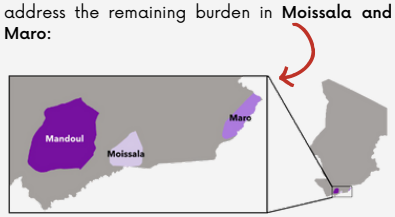
Imperfect test specificity in the Mean AS & VC (a) strategy could result in direct costs in over-treatment and **further substantial costs** due to the **inability to confidently cease** VC and AS:




The model indicates that **halting** AS **and VC** in Mandoul is **cost-effective** provided passive screening remains robust:




Resources towards sleeping sickness prevention and treatment in Mandoul could be **diverted** to address the remaining burden in **Moissala and Maro:**

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