

# 7th Mine Occupational Health Dialogue

## The Journey towards ZERO HARM in Health

*“Where are we in SAMI?”*

*SAMI Health Trends*

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Occupational Hygiene Statistical Analyst  
19 March 2026



mineral &  
petroleum resources

Department:  
Mineral and Petroleum Resources  
REPUBLIC OF SOUTH AFRICA

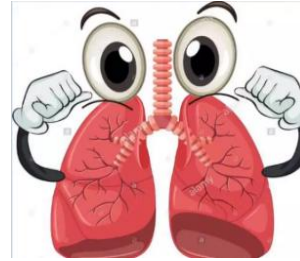
A **NATION**   
THAT **WORKS** FOR ALL



# OUTLINE



**ELIMINATION OF NIHL**  
Employee Personal Exposures  
NIHL - Cases



**ELIMINATION OF OLDs**  
Employee Personal Exposures  
OLD - Cases



**ELIMINATION OF HEAT-RELATED ILLNESSES**  
Employee Personal Exposures



**NON-COMMUNICABLE DISEASES**  
NCDs - Cases

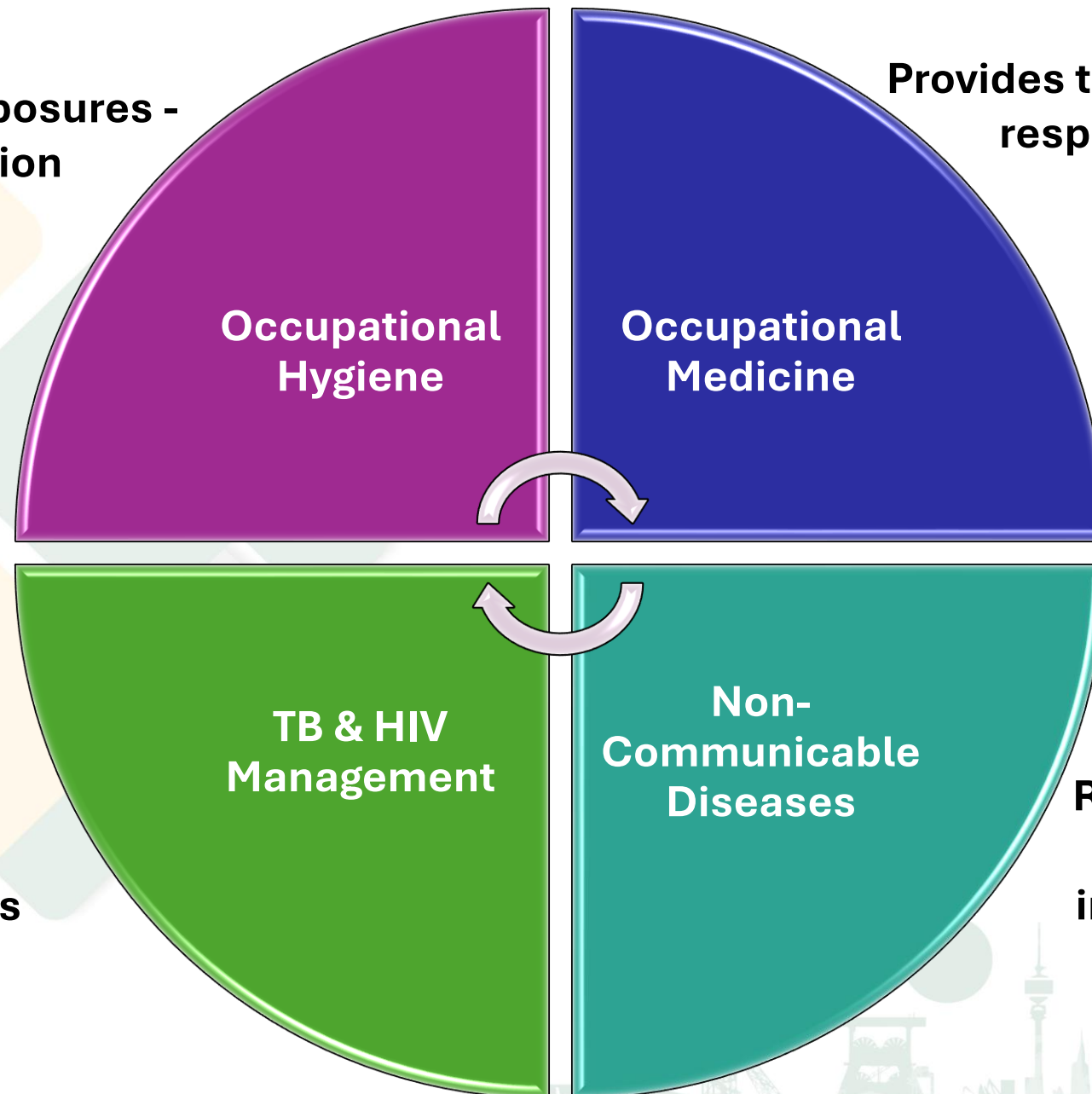


**TB & HIV & MANAGEMENT**  
HIV programme  
TB Incidence Rates





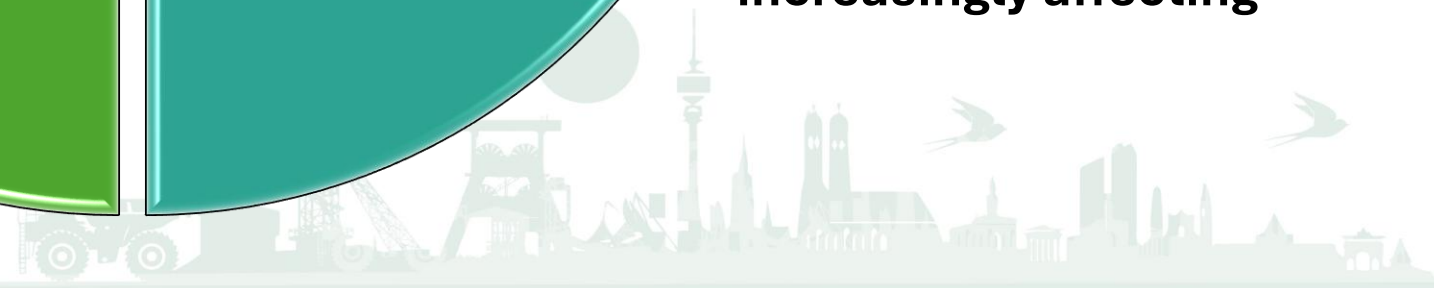
**Provides Hazardous Exposures -  
Environmental Foundation**



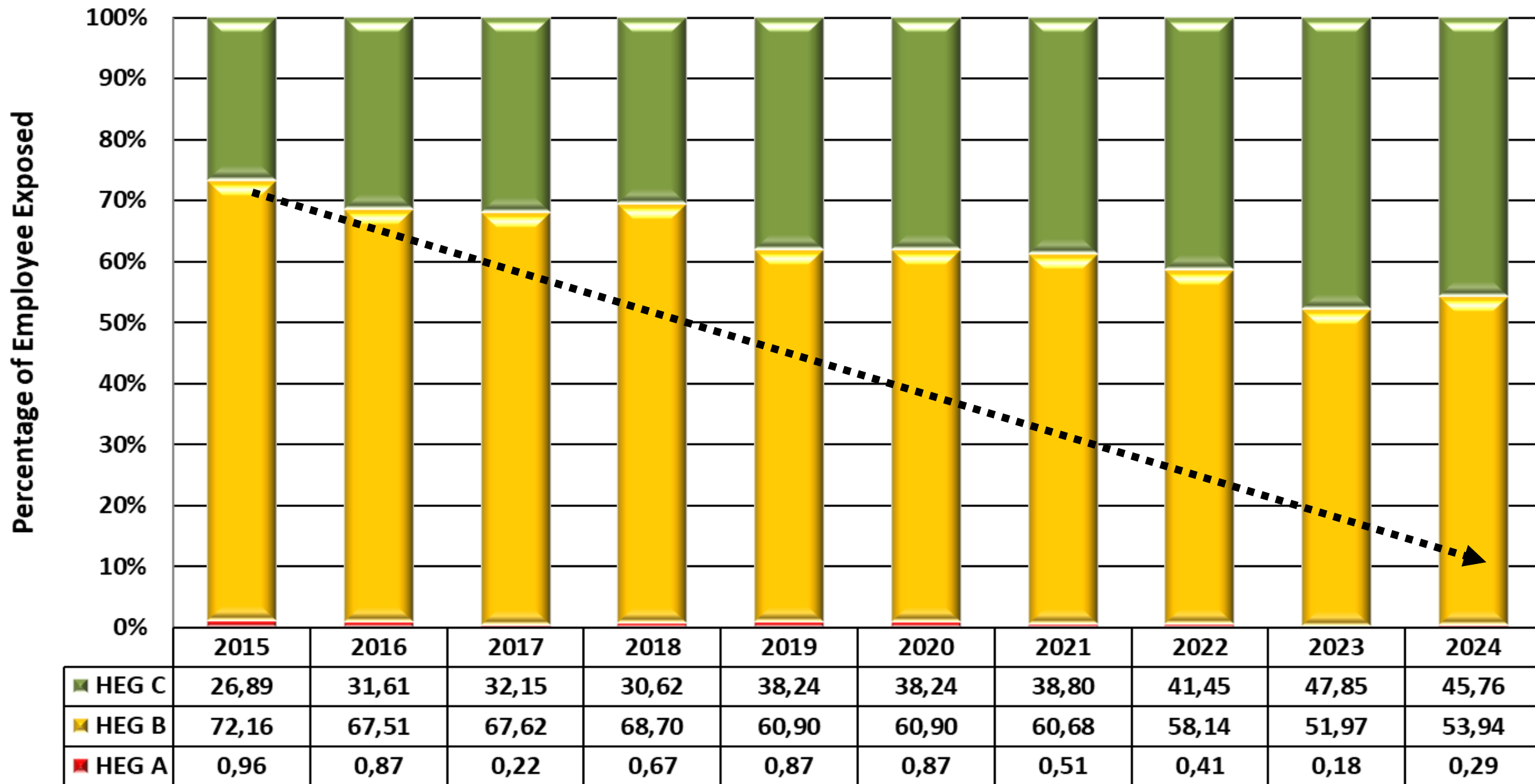
**Provides the clinical  
response**

**Priority for persistent  
communicable diseases**

**Representation of the  
chronic burden is  
increasingly affecting**



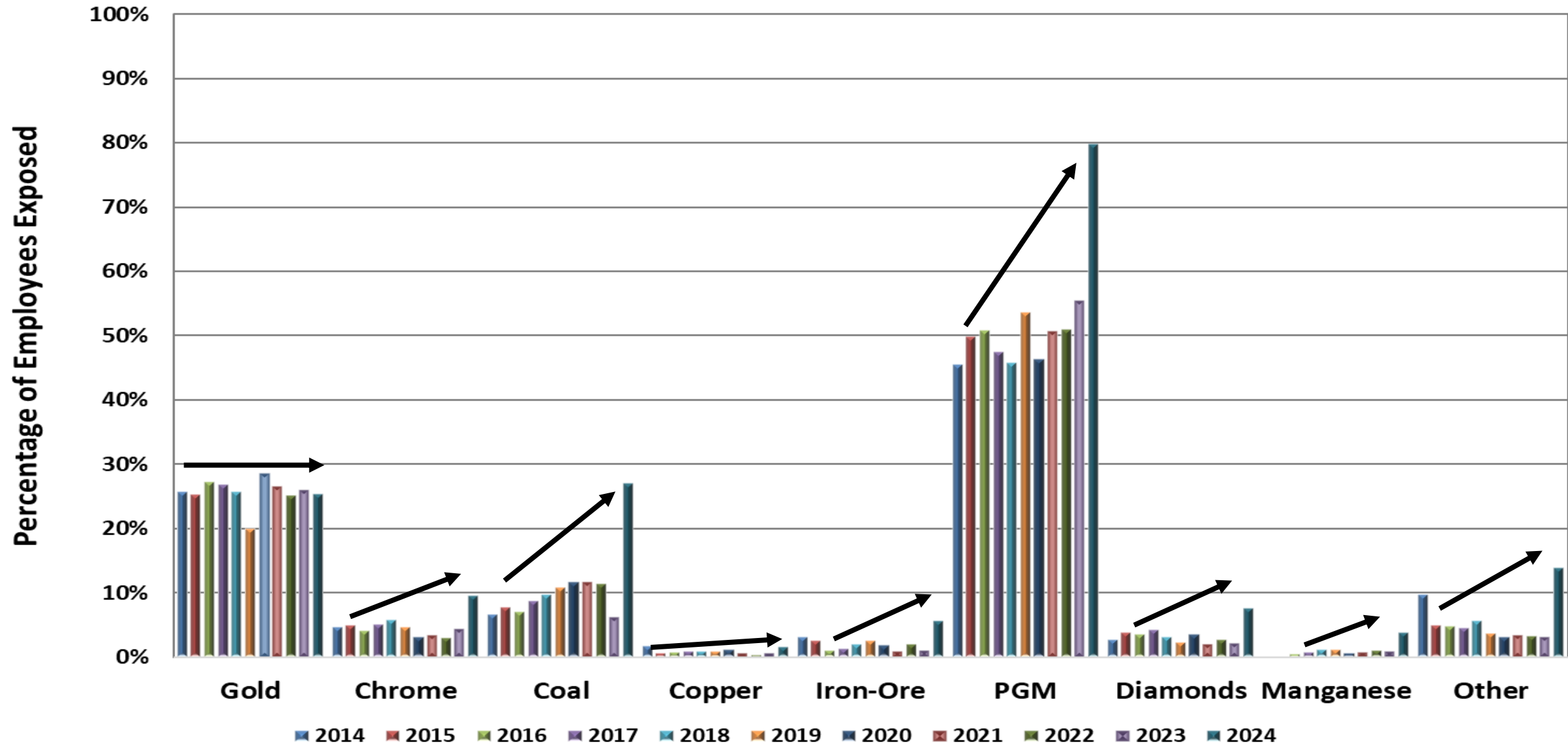
# Elimination of NIHL – Exposures



# Elimination of NIHL - Exposures



Exposure to Noise  $\geq$  OEL (85 dB(A))

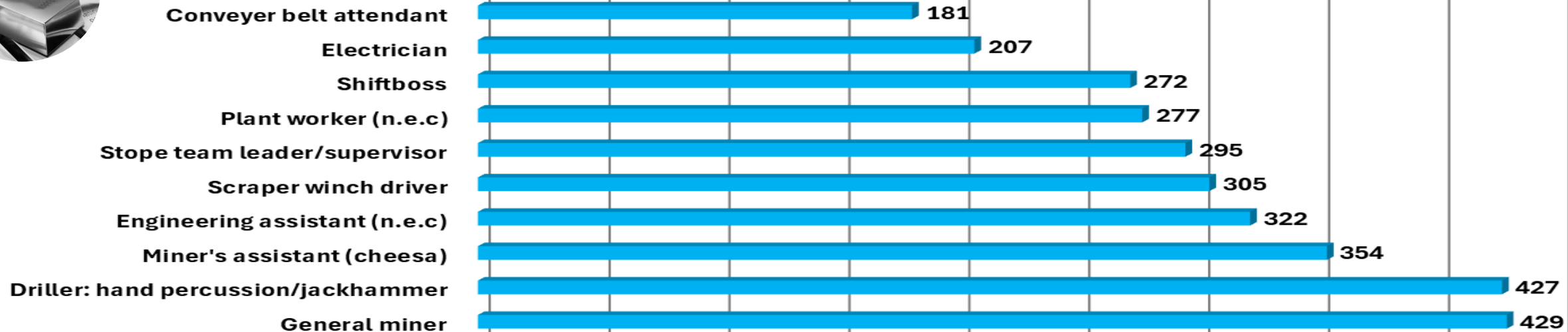


# Elimination of NIHL

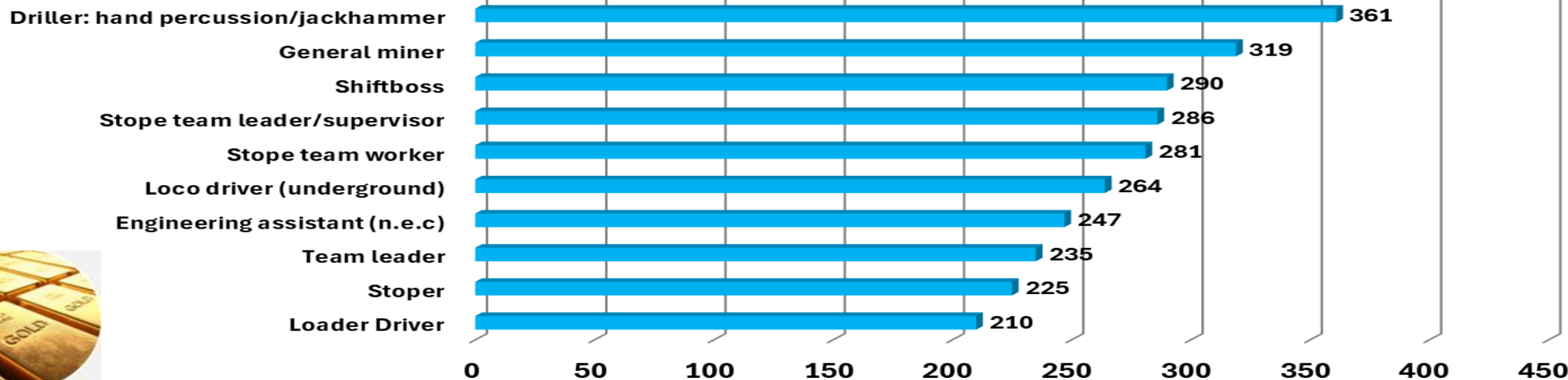


PGM

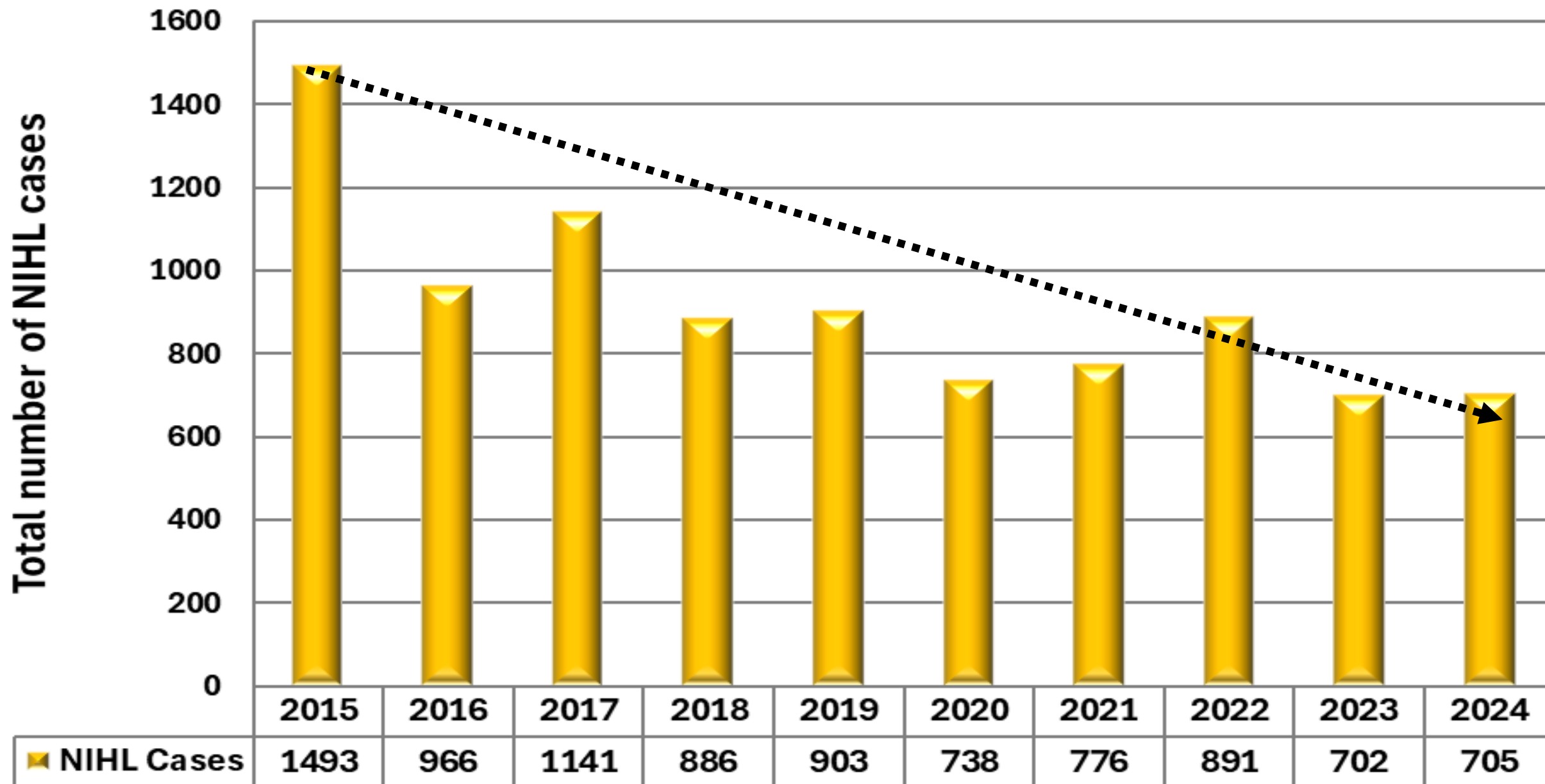
## Top 10 Occupations > OEL (85 dB(A))



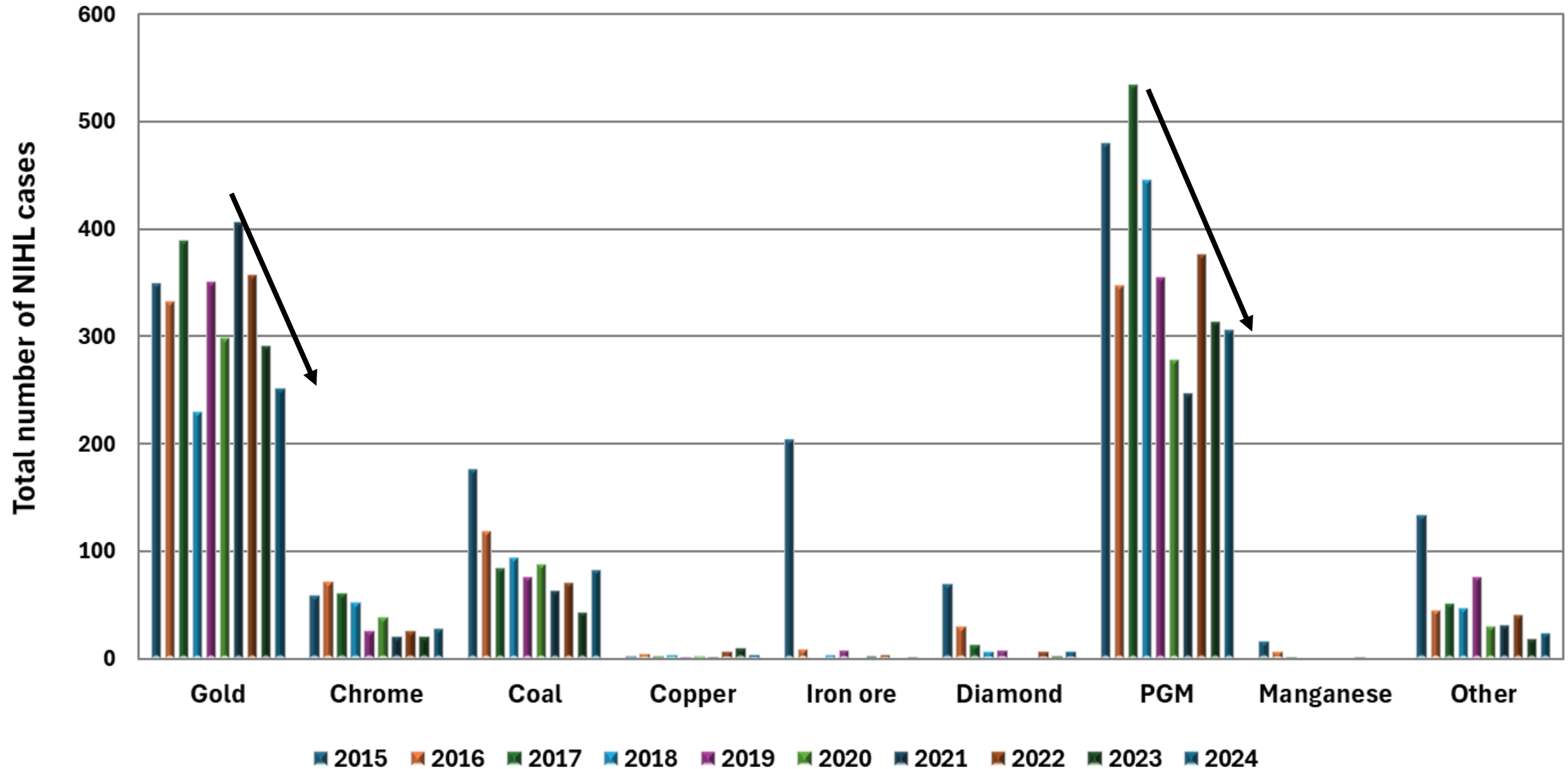
GOLD



# Elimination of NIHL - Cases



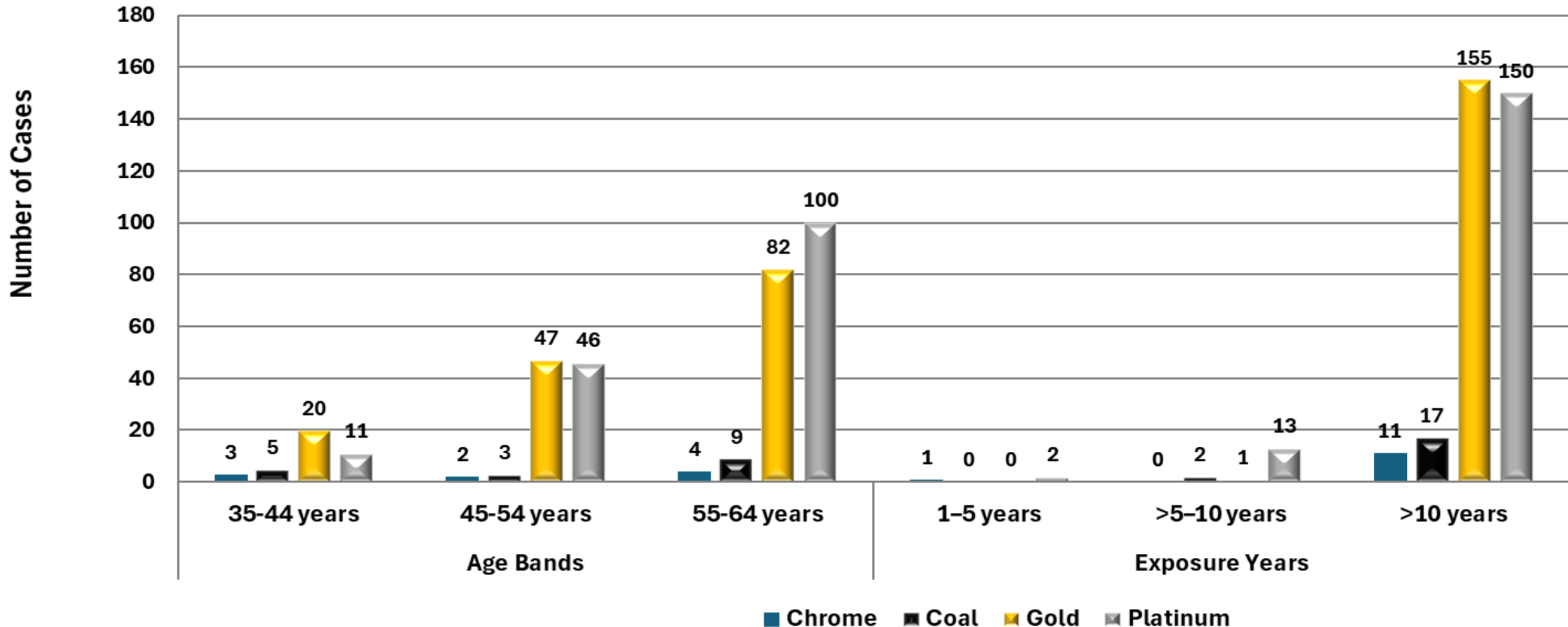
# Elimination of NIHL - Cases



# Elimination of NIHL



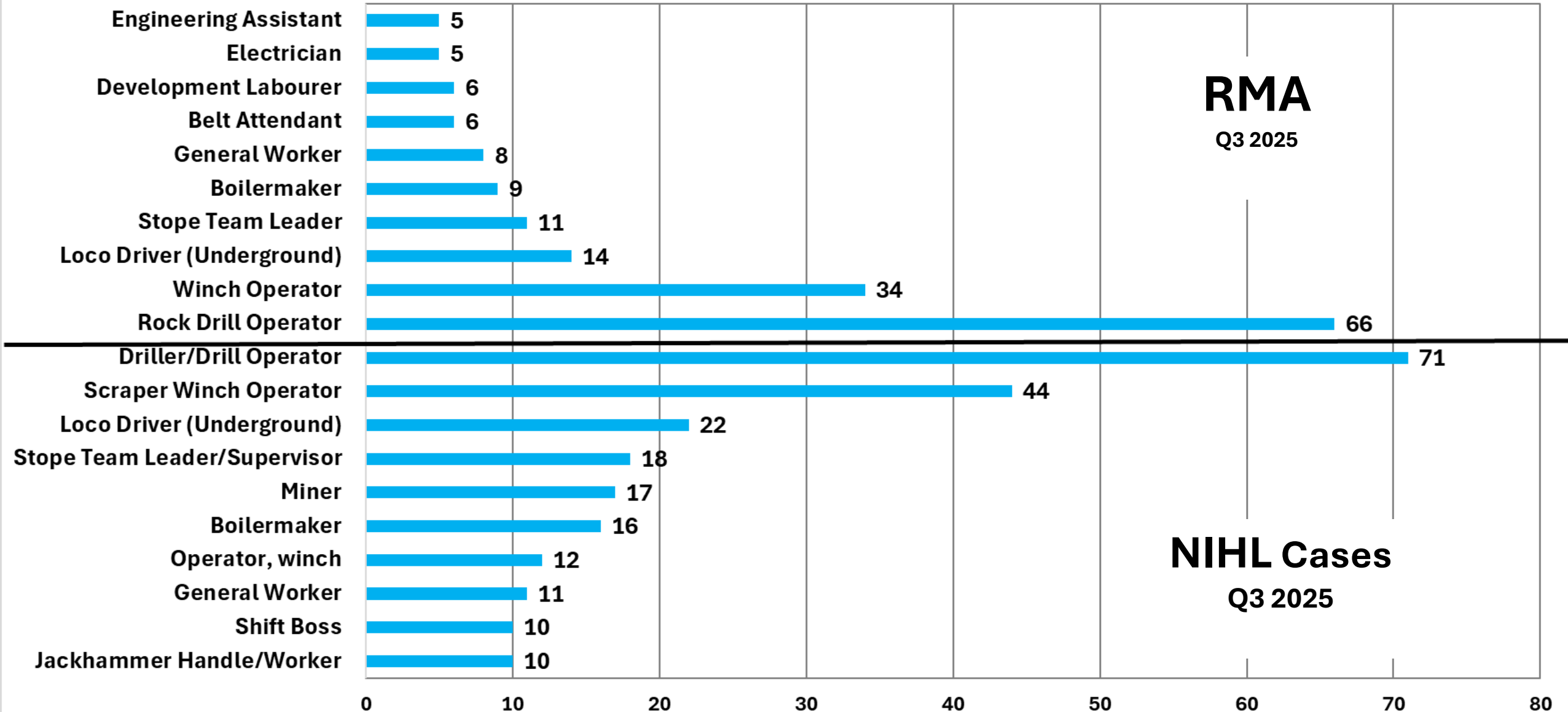
NIHL Cases 2025  
Age Bands & Years of Exposure



# Elimination of NIHL



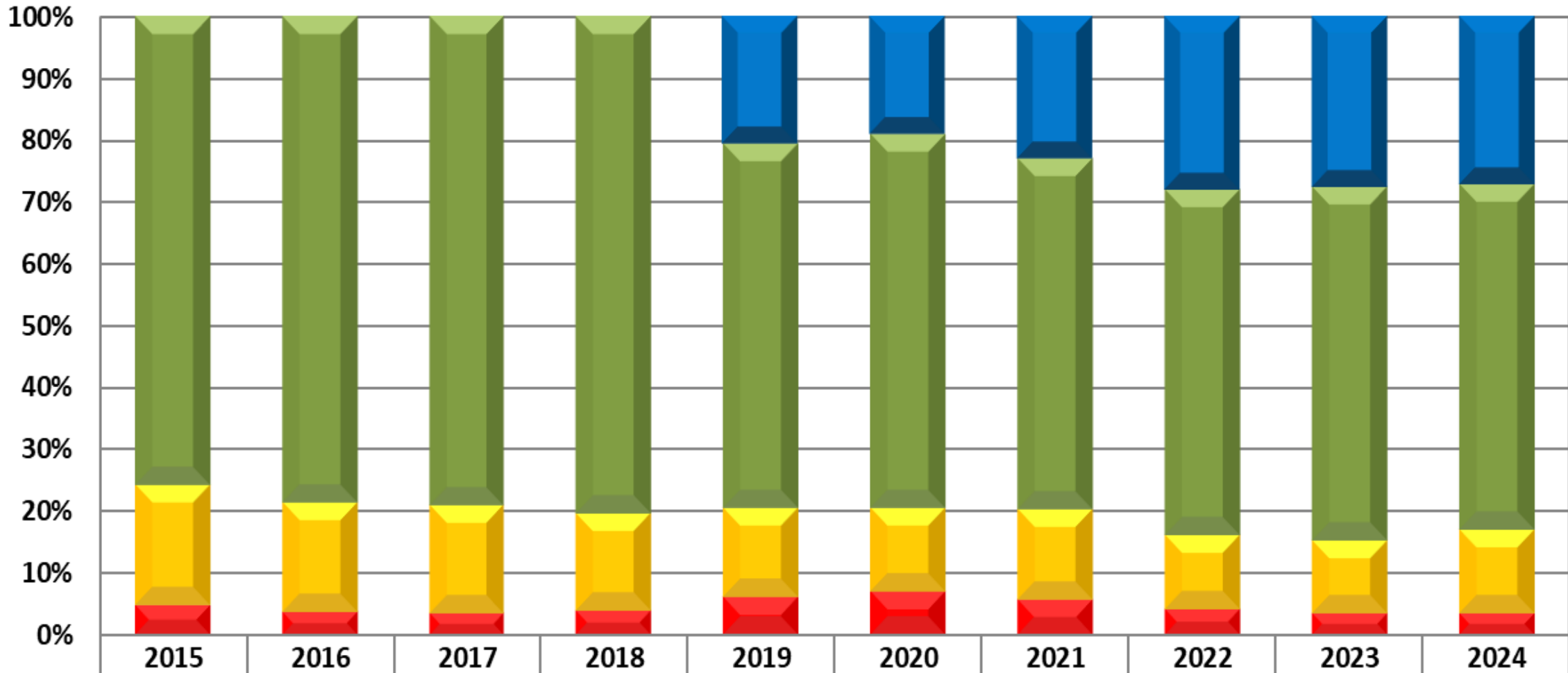
NIHL Cases - Reported Occupation vs Compensated Occupations



# Elimination of OLD - Exposures



Percentage of employees exposed

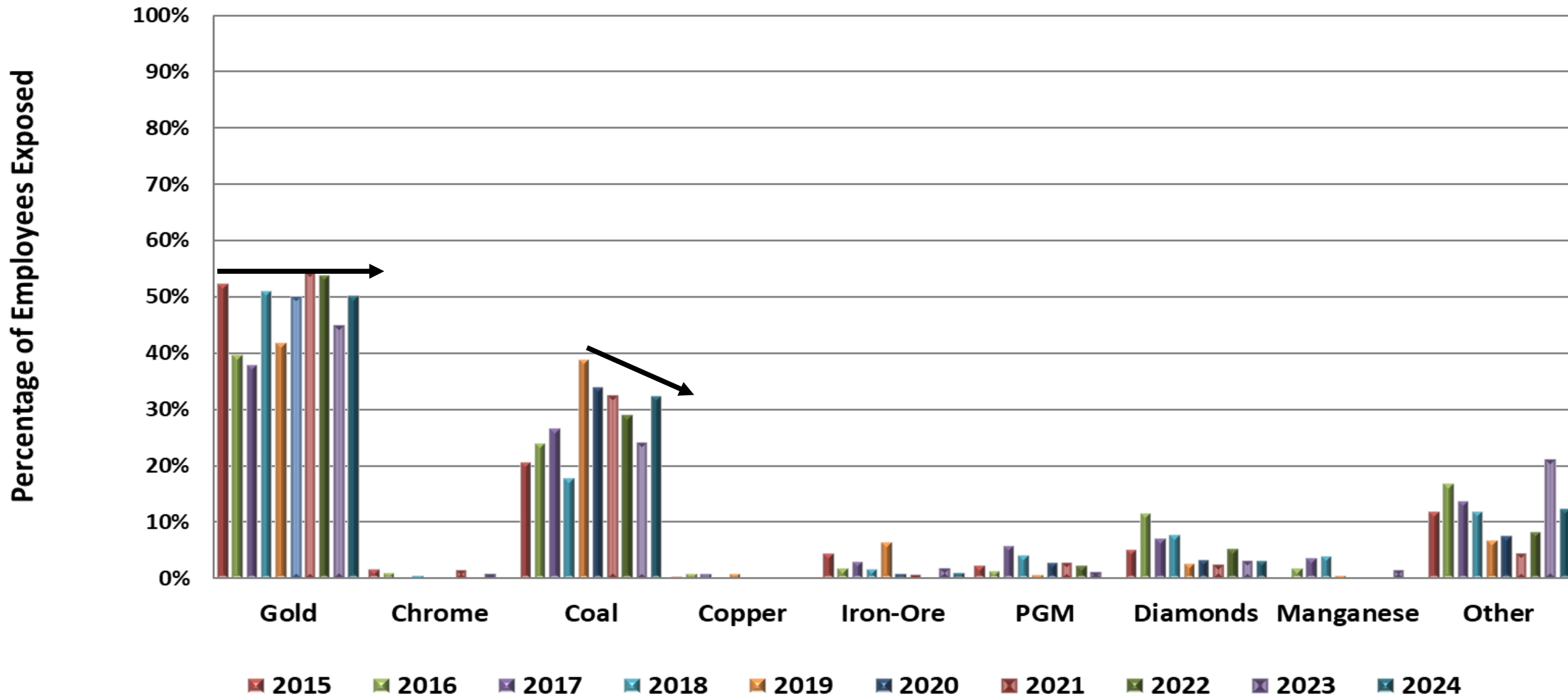


|         |       |       |       |       |       |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ■ HEG D |       |       |       |       | 20,64 | 18,90 | 22,91 | 27,90 | 27,51 | 27,03 |
| ■ HEG C | 75,80 | 78,55 | 79,07 | 80,44 | 58,84 | 60,61 | 56,86 | 55,90 | 57,26 | 55,93 |
| ■ HEG B | 19,47 | 17,79 | 17,45 | 15,68 | 14,39 | 13,61 | 14,69 | 12,12 | 11,82 | 13,68 |
| ■ HEG A | 4,73  | 3,66  | 3,52  | 3,89  | 6,13  | 6,87  | 5,54  | 4,08  | 3,41  | 3,36  |

# Elimination of OLD - Exposures



Exposure to Airborne Pollutants  $\geq$  OEL

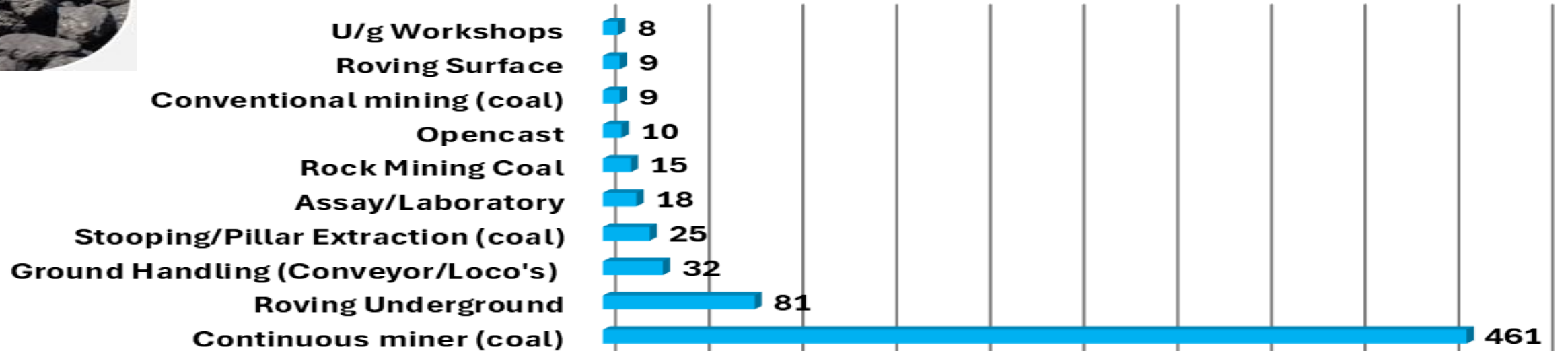


# Elimination of OLD

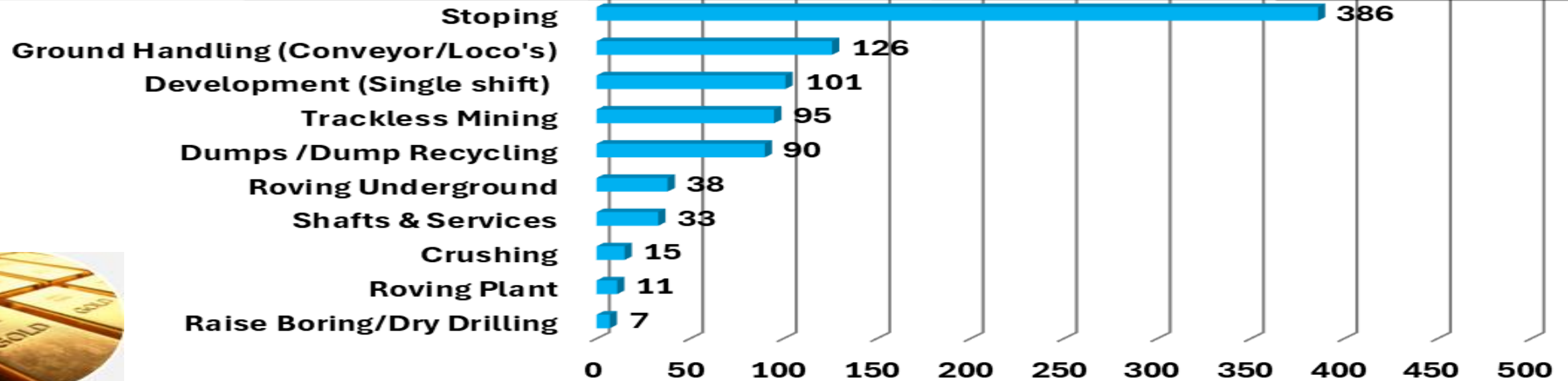


## Top 10 Occupations > OEL: Airborne Pollutants

COAL



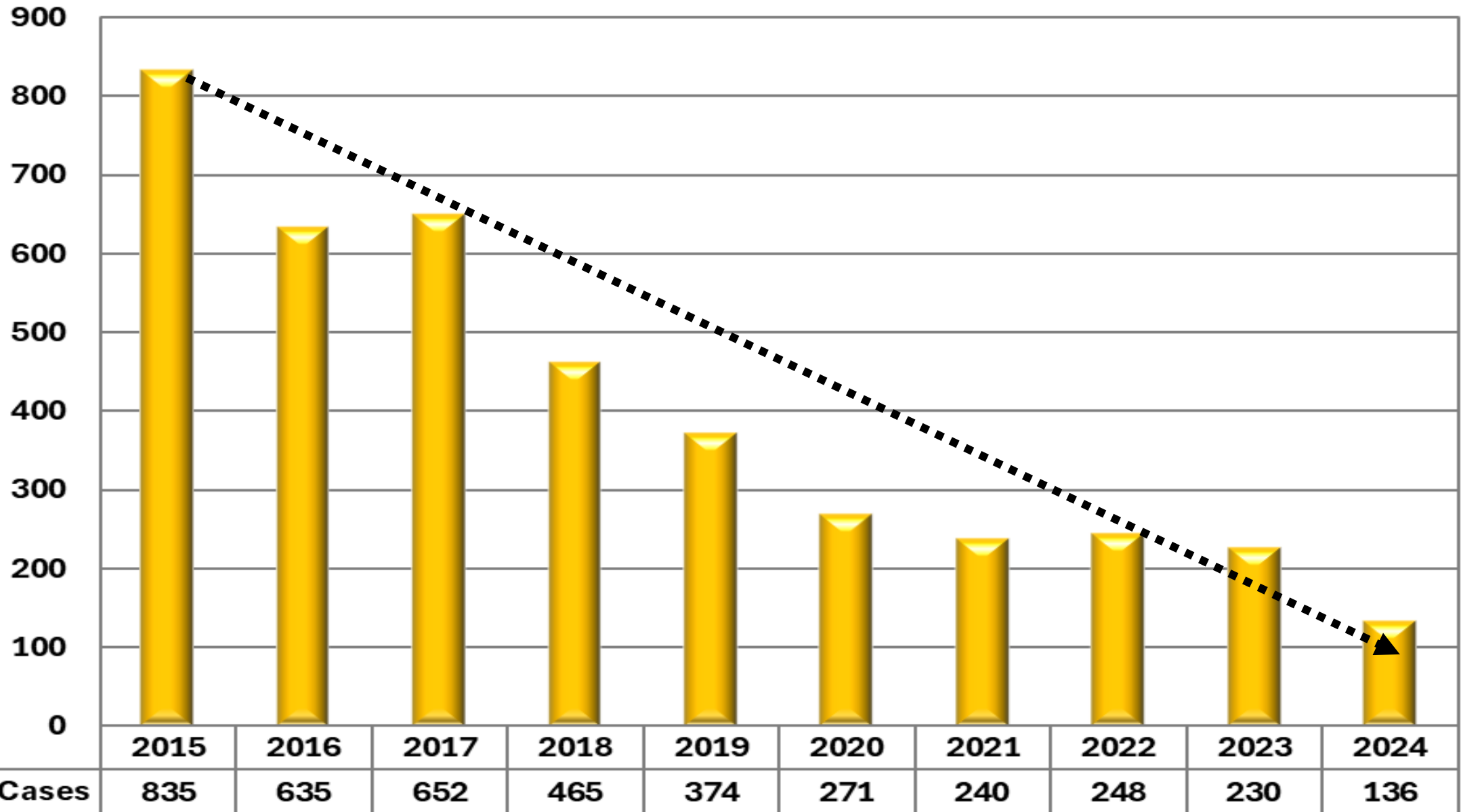
GOLD



# Elimination of OLD - Silicosis Cases

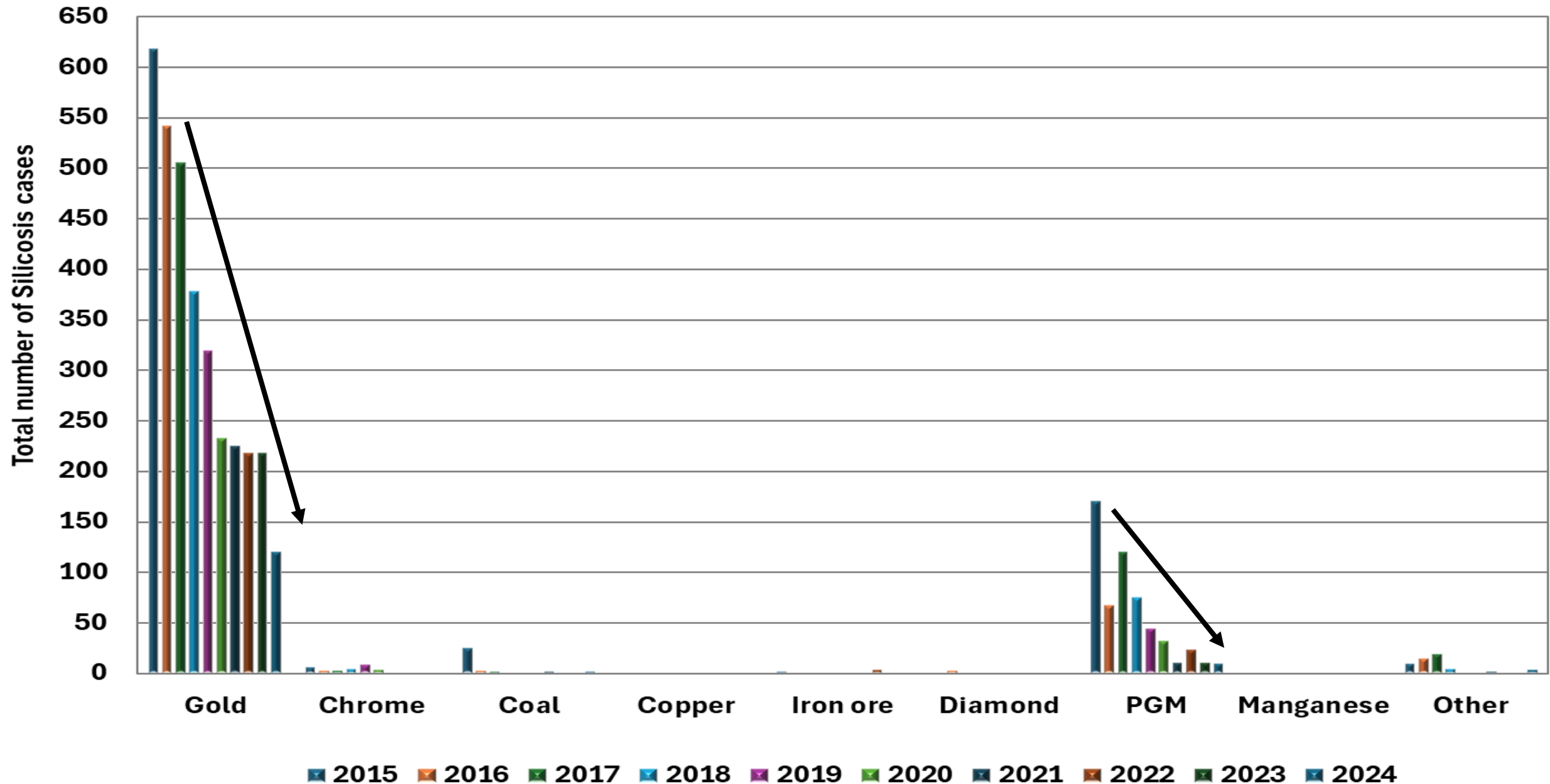


Total number of silicoses cases



■ Silicosis Cases

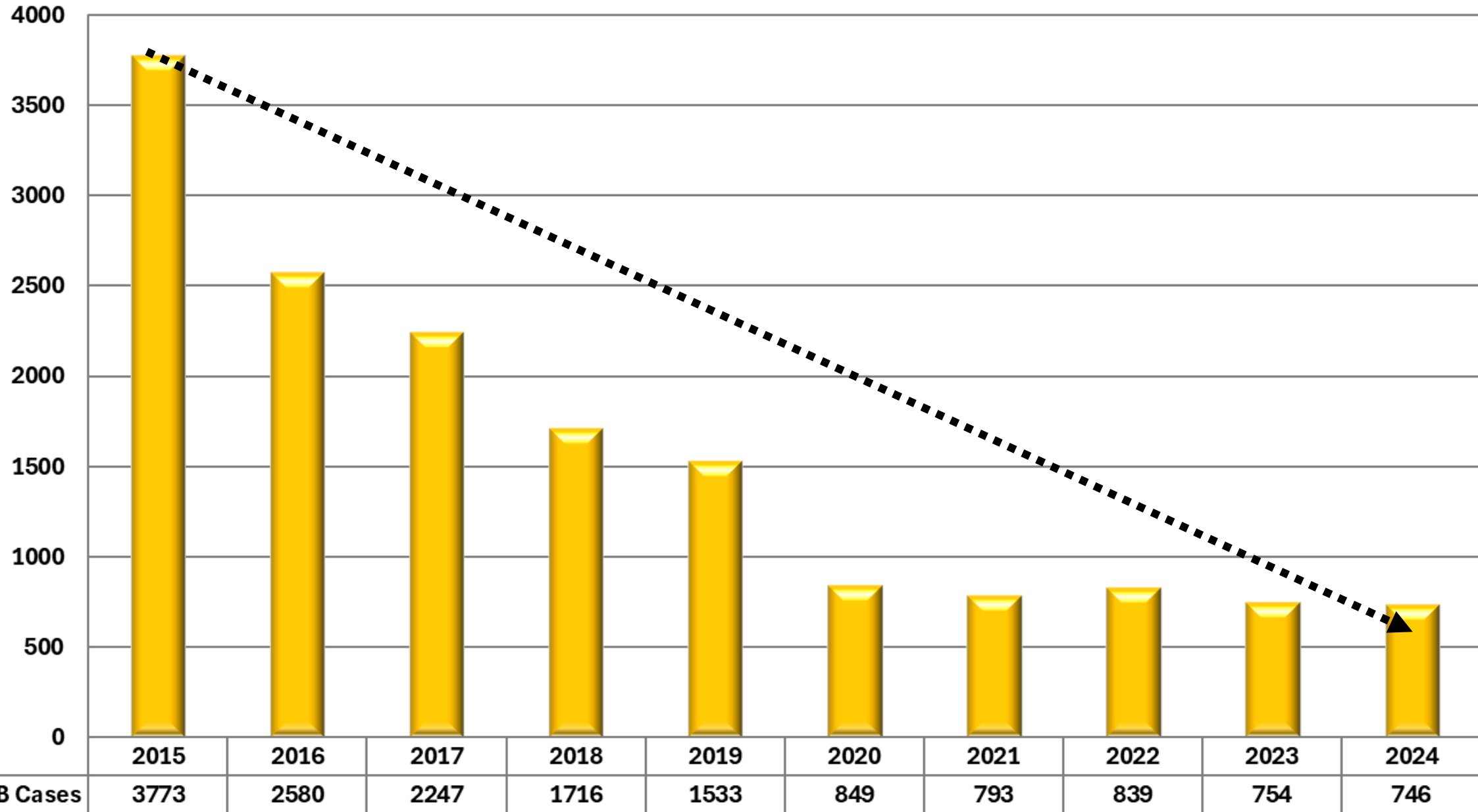
# Elimination of OLD - Silicosis Cases



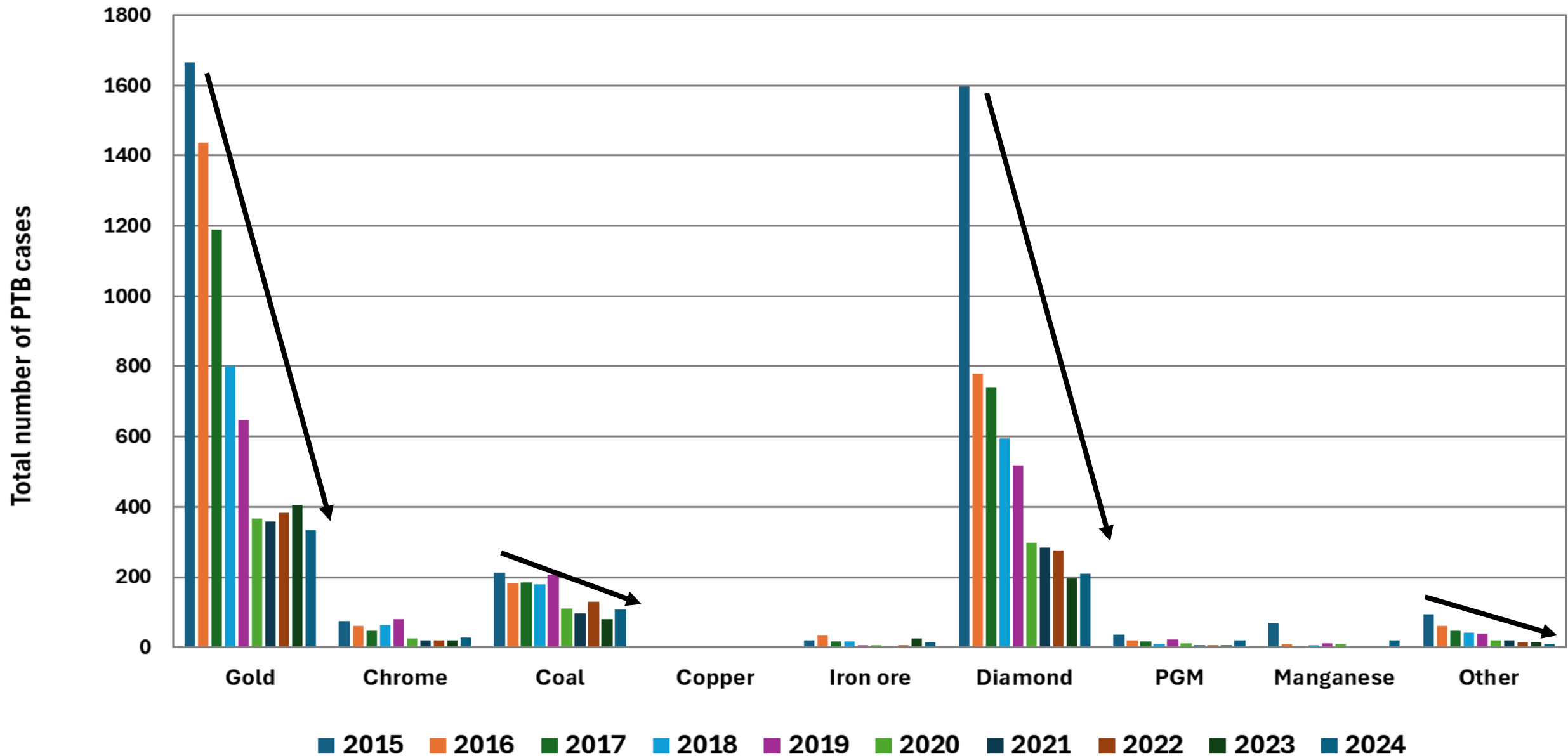
# Elimination of OLD – PTB Cases



Total number of PTB cases



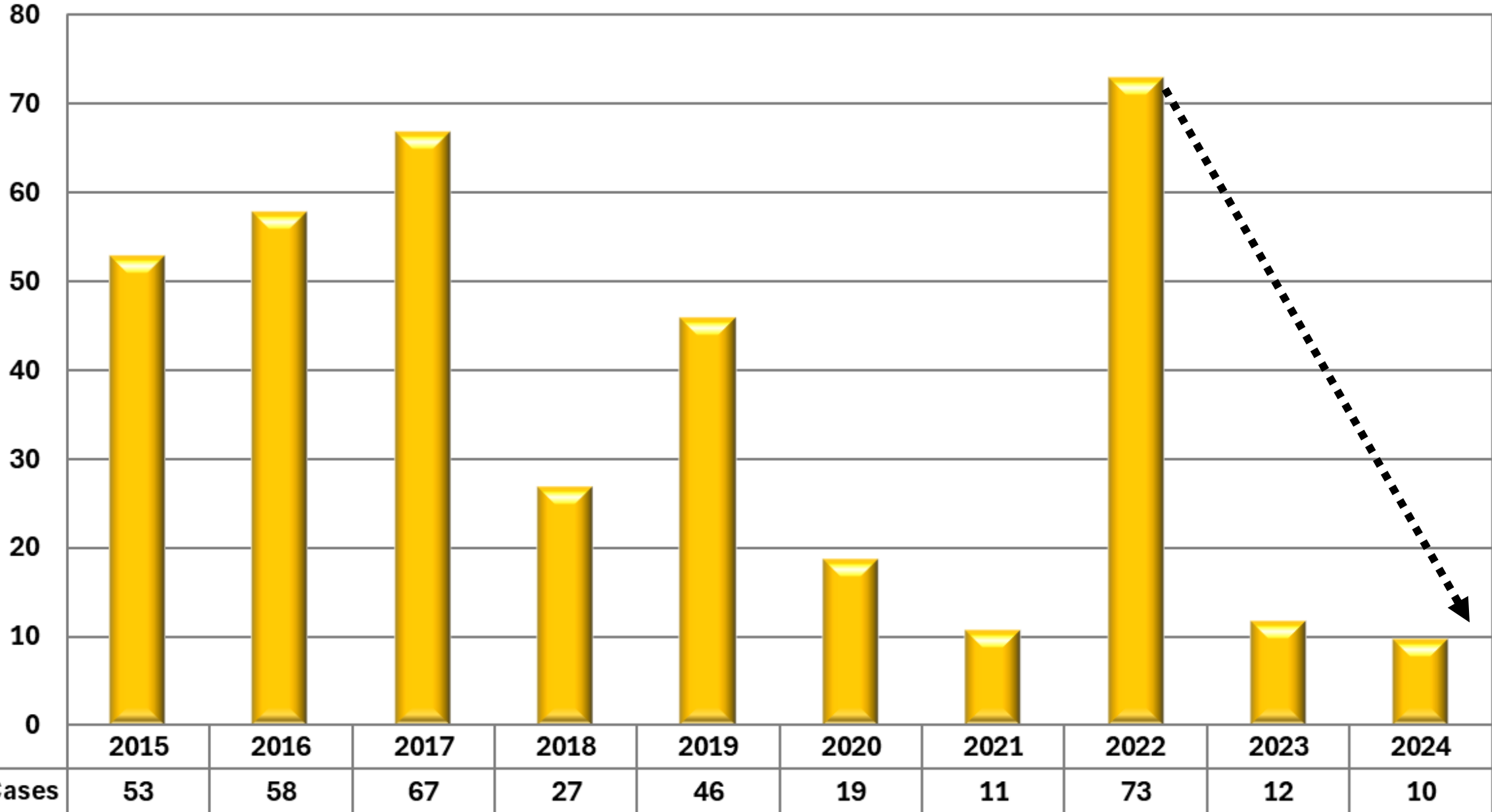
# Elimination of OLD - PTB Cases



# Elimination of OLD – CWP Cases



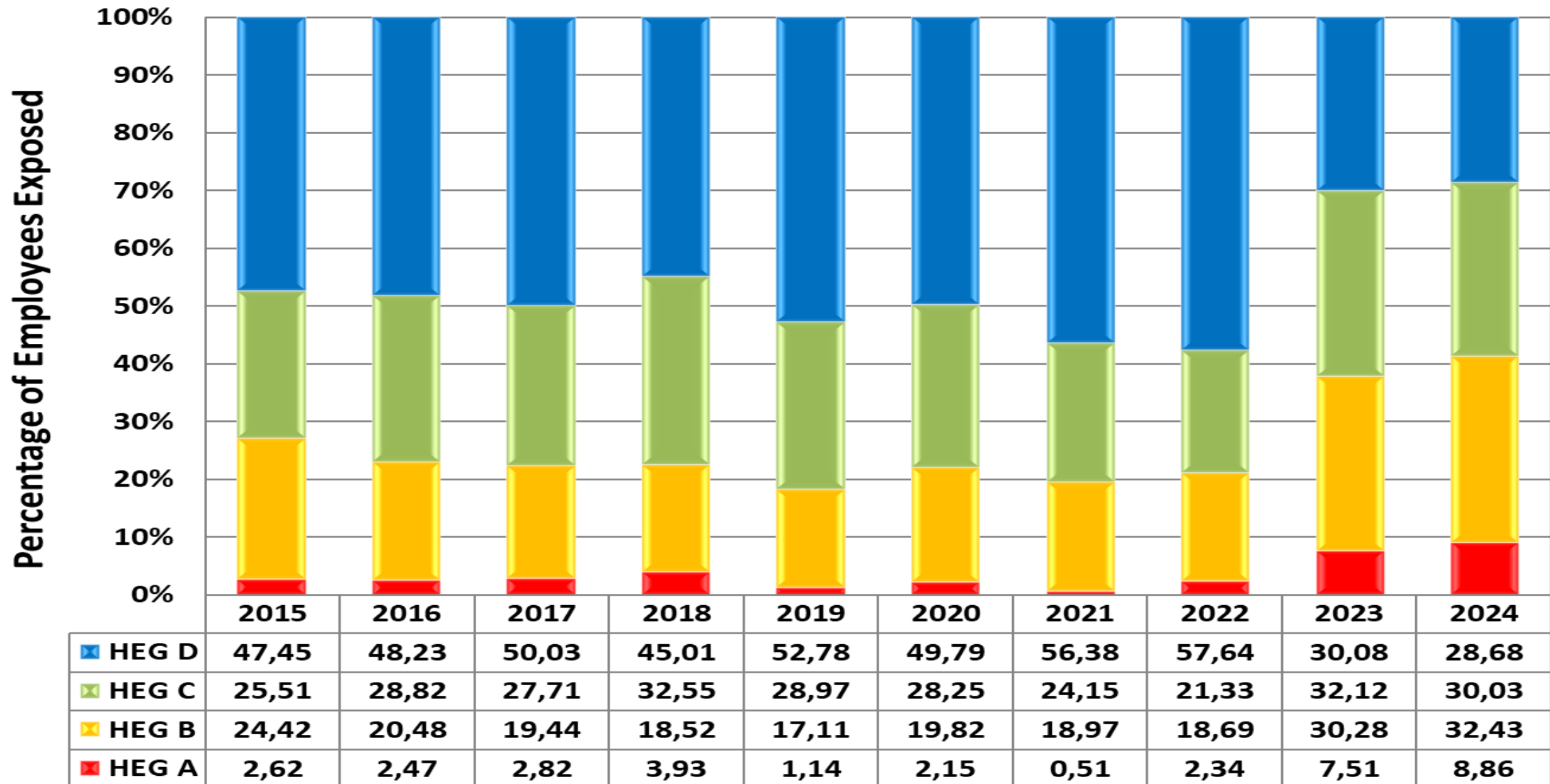
Total number of CWP cases



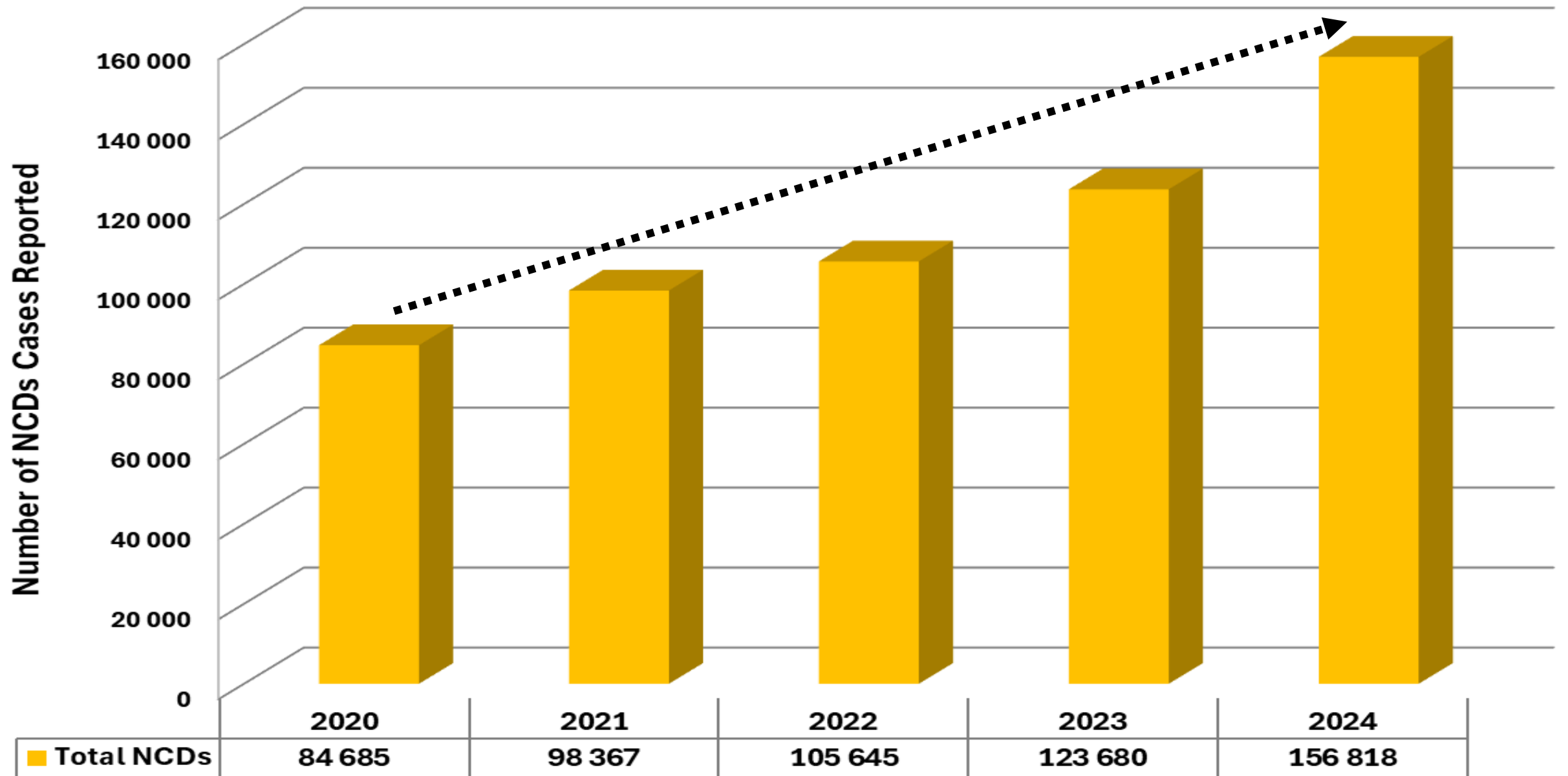
■ CWP Cases



# Elimination of Heat-Related Illnesses



# Non-Communicable Diseases



# Non-Communicable Diseases

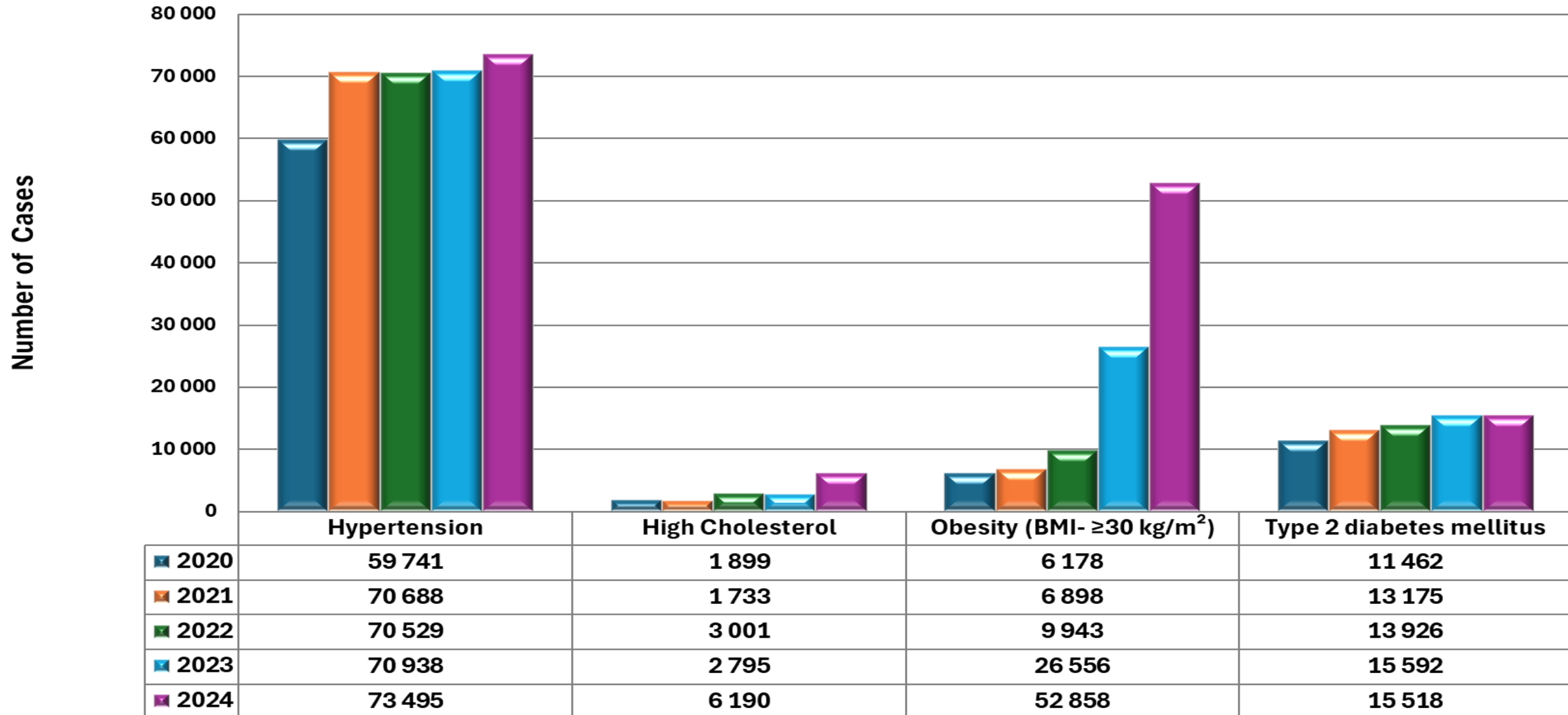


|                                                  | <u>2020</u>   | <u>2021</u>   | <u>2022</u>    | <u>2023</u>    | <u>2024</u>    |
|--------------------------------------------------|---------------|---------------|----------------|----------------|----------------|
| <b>Autoimmune disorders</b>                      | 1 884         | 1 776         | 2 506          | 1 843          | 1 535          |
| <b>Cancer</b>                                    | 25            | 25            | 64             | 84             | 105            |
| <b>Cardiovascular diseases (CVD)</b>             | 175           | 261           | 68             | 107            | 99             |
| <b>Cerebrovascular diseases</b>                  | 7             | 9             | 10             | 1              | 0              |
| <b>Chronic respiratory diseases (CRD)</b>        | 1 840         | 2 309         | 2 379          | 2 753          | 2 492          |
| <b>Endocrine &amp; metabolic disorders (EMD)</b> | 79 402        | 92 403        | 98 461         | 116 616        | 148 106        |
| <b>Diseases of the genitourinary system</b>      | 5             | 38            | 75             | 121            | 48             |
| <b>Infectious diseases (Bacterial)</b>           | 0             | 0             | 0              | 31             | 0              |
| <b>Mental health &amp; behavioural disorders</b> | 401           | 517           | 468            | 650            | 1 570          |
| <b>Diseases of the musculoskeletal system</b>    | 0             | 0             | 154            | 65             | 184            |
| <b>Neurological and sense organ disorders</b>    | 946           | 1 029         | 1 460          | 1 395          | 1 894          |
| <b>Other/Unclassified NCDs</b>                   | 0             | 0             | 0              | 14             | 785            |
| <b>TOTAL</b>                                     | <b>84 685</b> | <b>98 367</b> | <b>105 645</b> | <b>123 680</b> | <b>156 818</b> |

# Non-Communicable Diseases



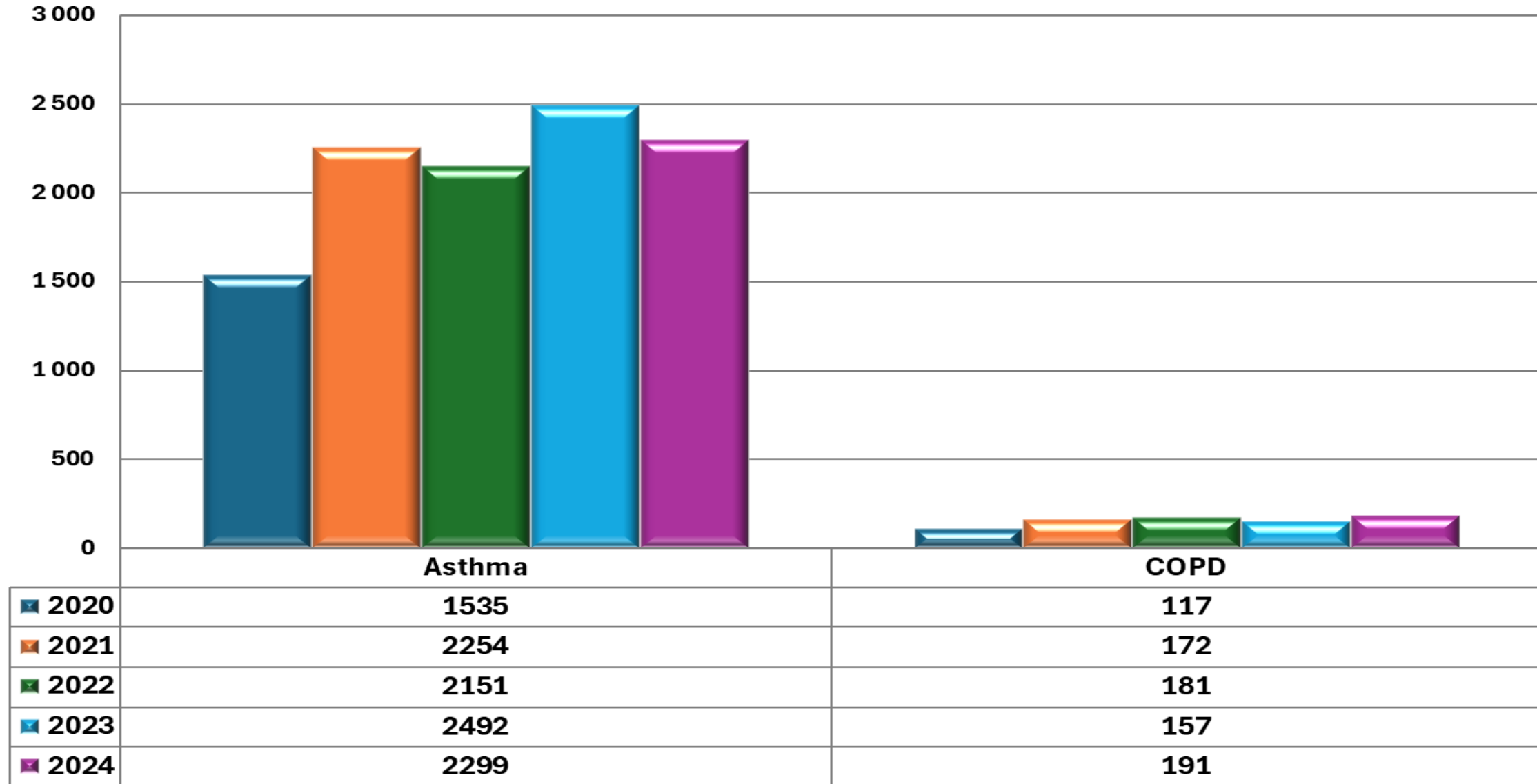
## Metabolic Risk Factors



# Non-Communicable Diseases



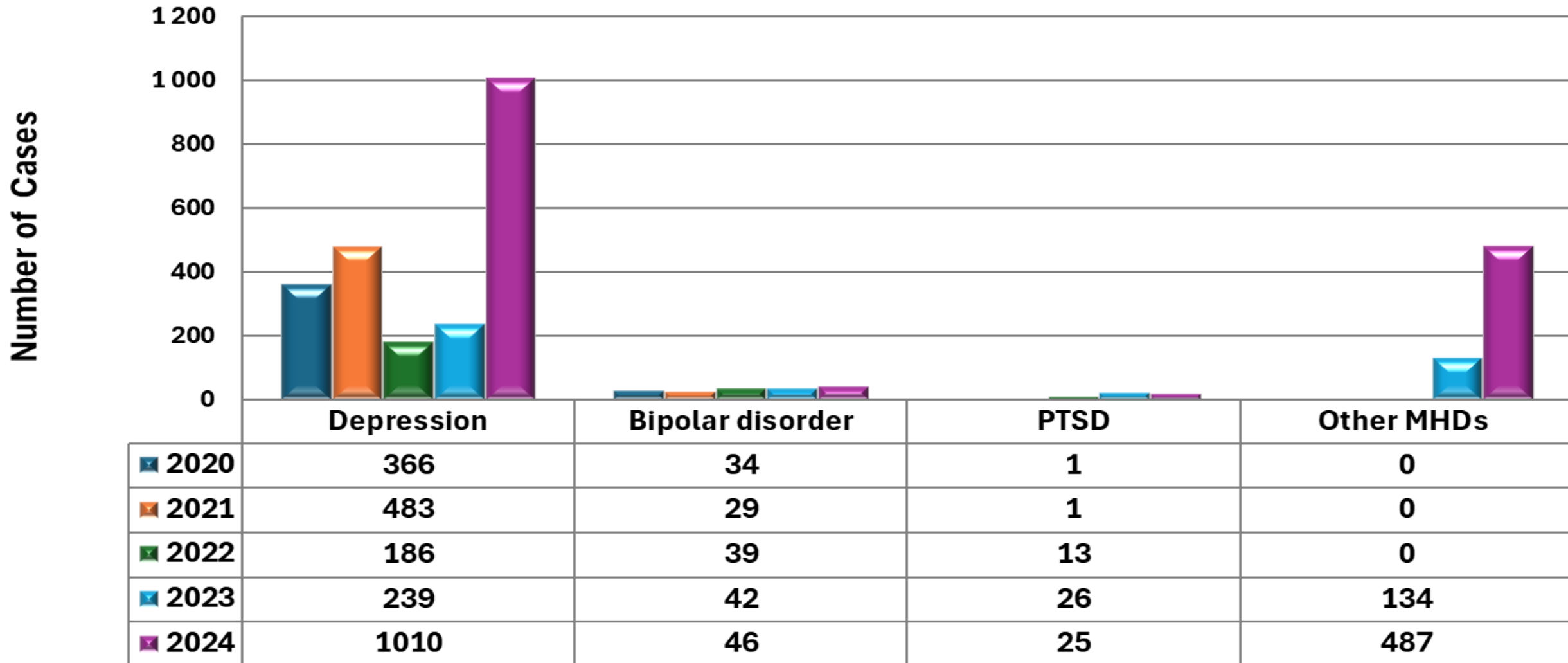
## Chronic Respiratory Diseases



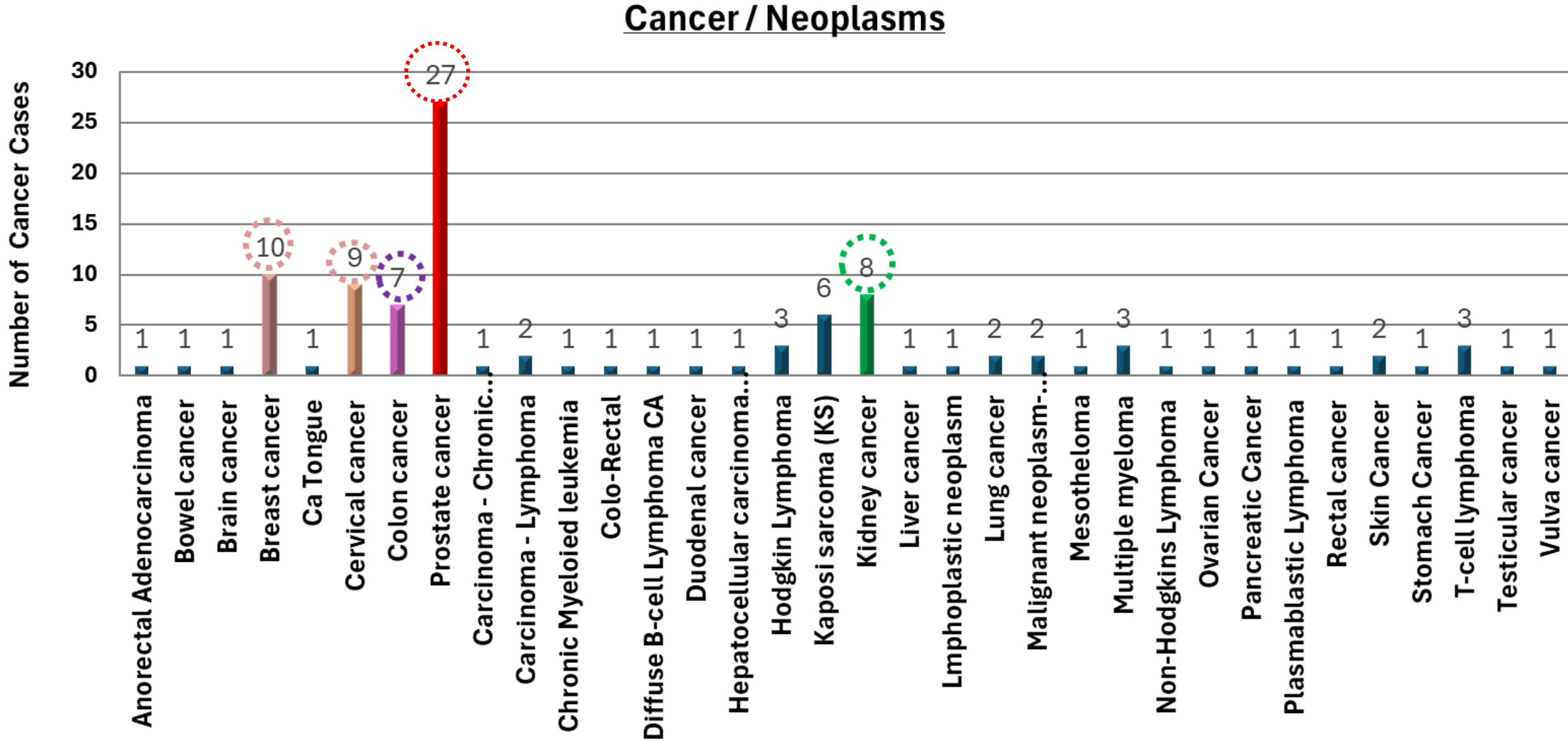
# Non-Communicable Diseases



## Mental & Behavioural Disorders



# Non-Communicable Diseases

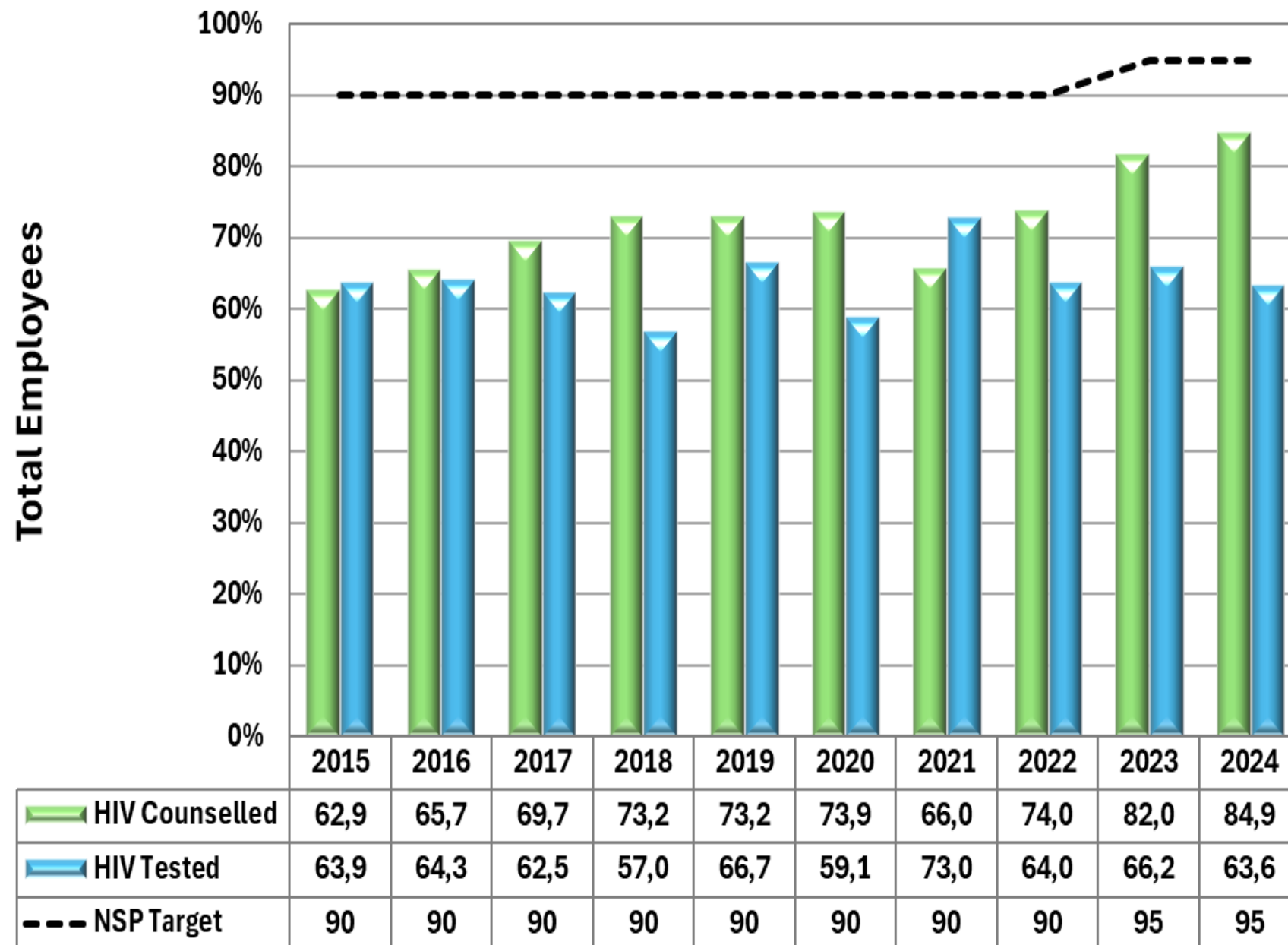




HIV Counselling coverage has been increasing steadily in recent years. This indicates improved implementation of HIV counselling programmes within the industry.



Despite improvements in counselling, HIV testing uptake has remained relatively stagnant, suggesting that employees may receive counselling but do not necessarily proceed to testing.



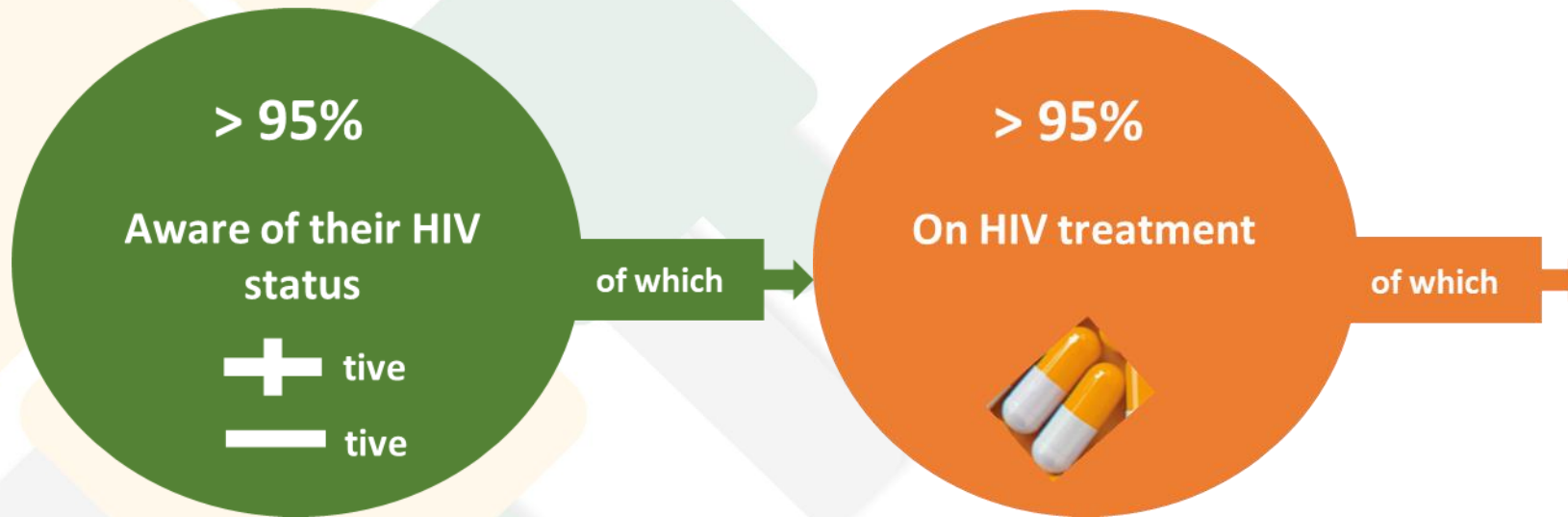
# HIV IN THE SAMI

## 95-95-95 National Strategic Plan



# HIV IN THE SAMI

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Sample Size

536 539

Counselled for HIV

Tested for HIV

HIV Positive



# HIV IN THE SAMI

## 95-95-95 National Strategic Plan



Sample Size

536 539

Counselled for HIV

453 109

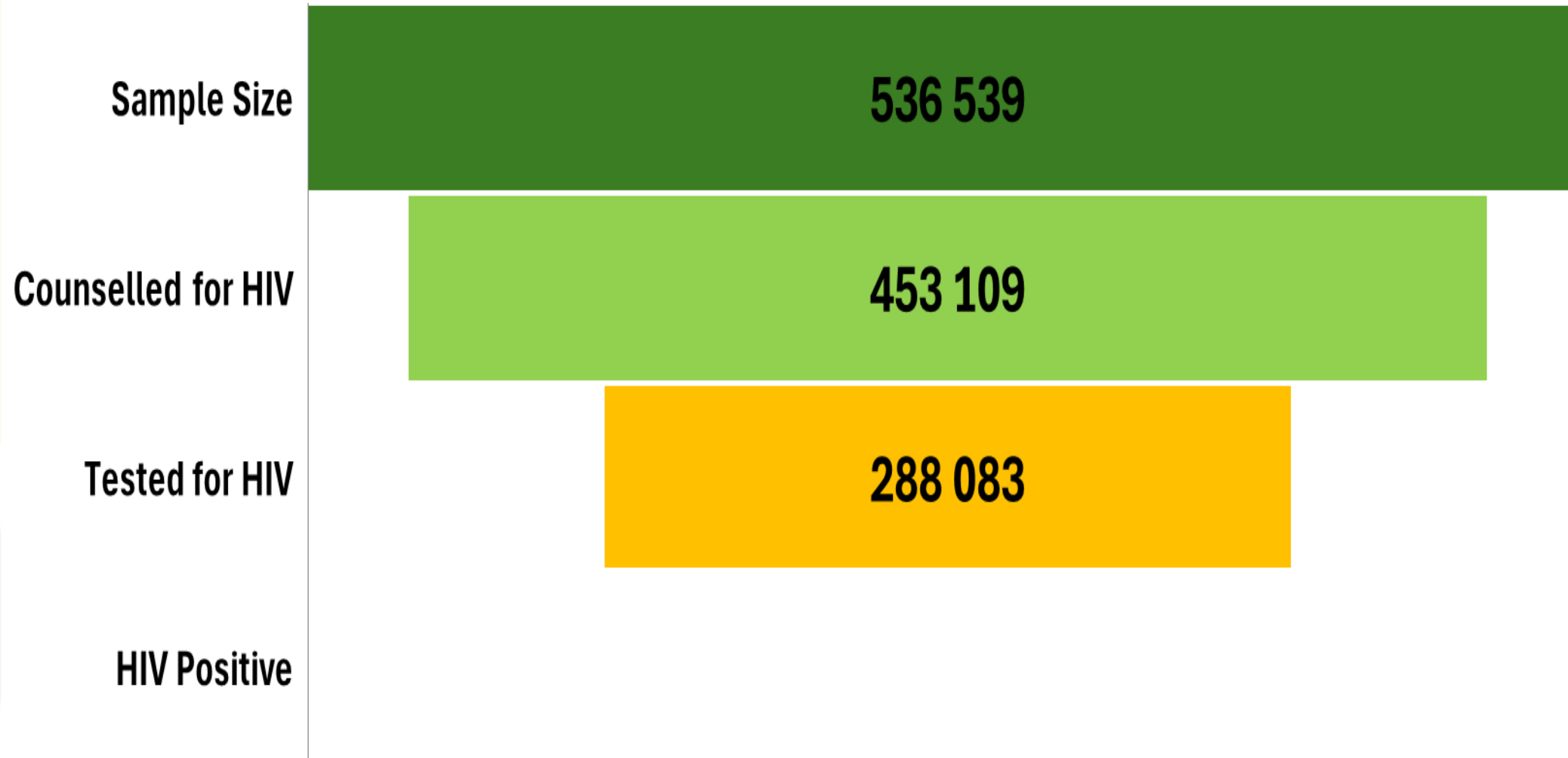
Tested for HIV

HIV Positive



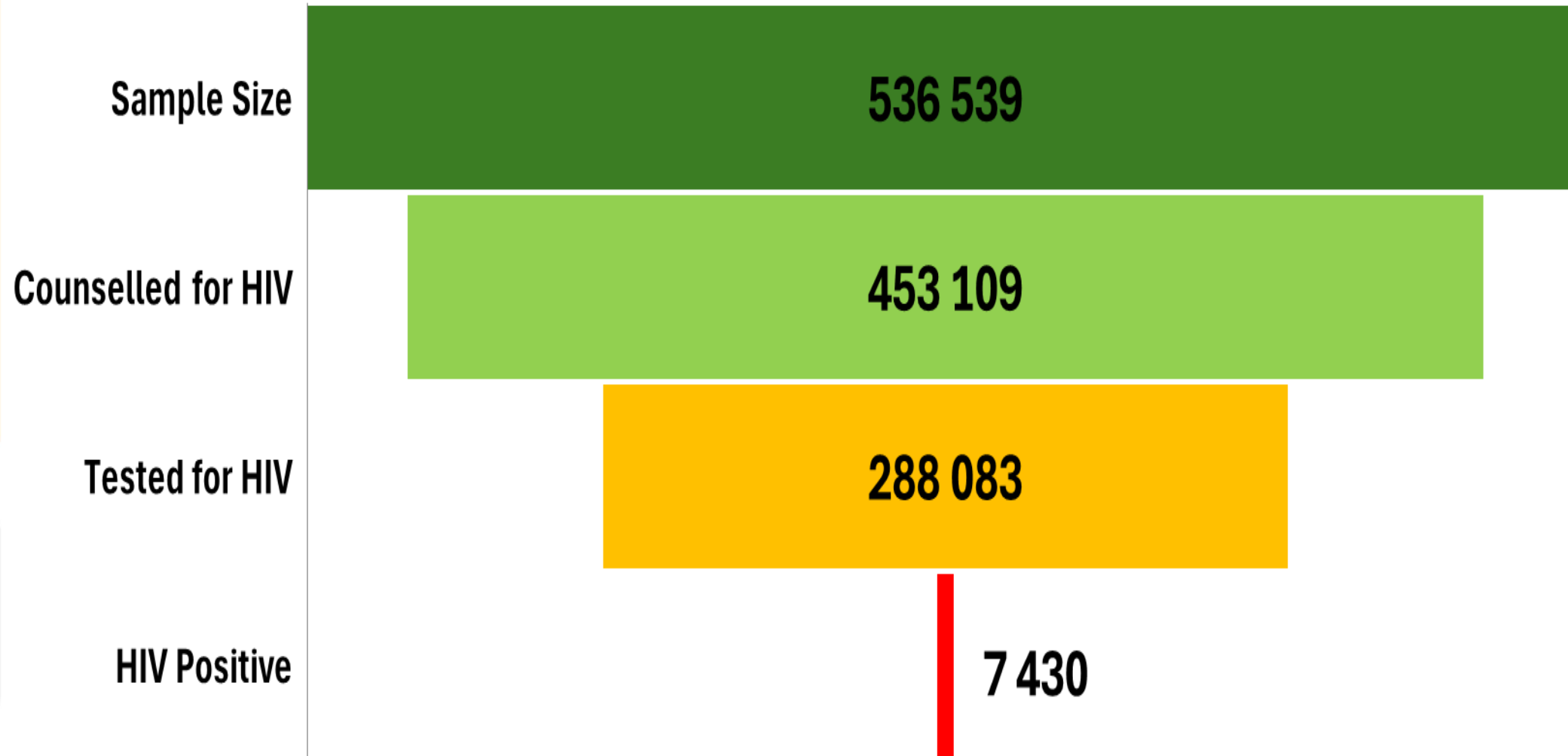
# HIV IN THE SAMI

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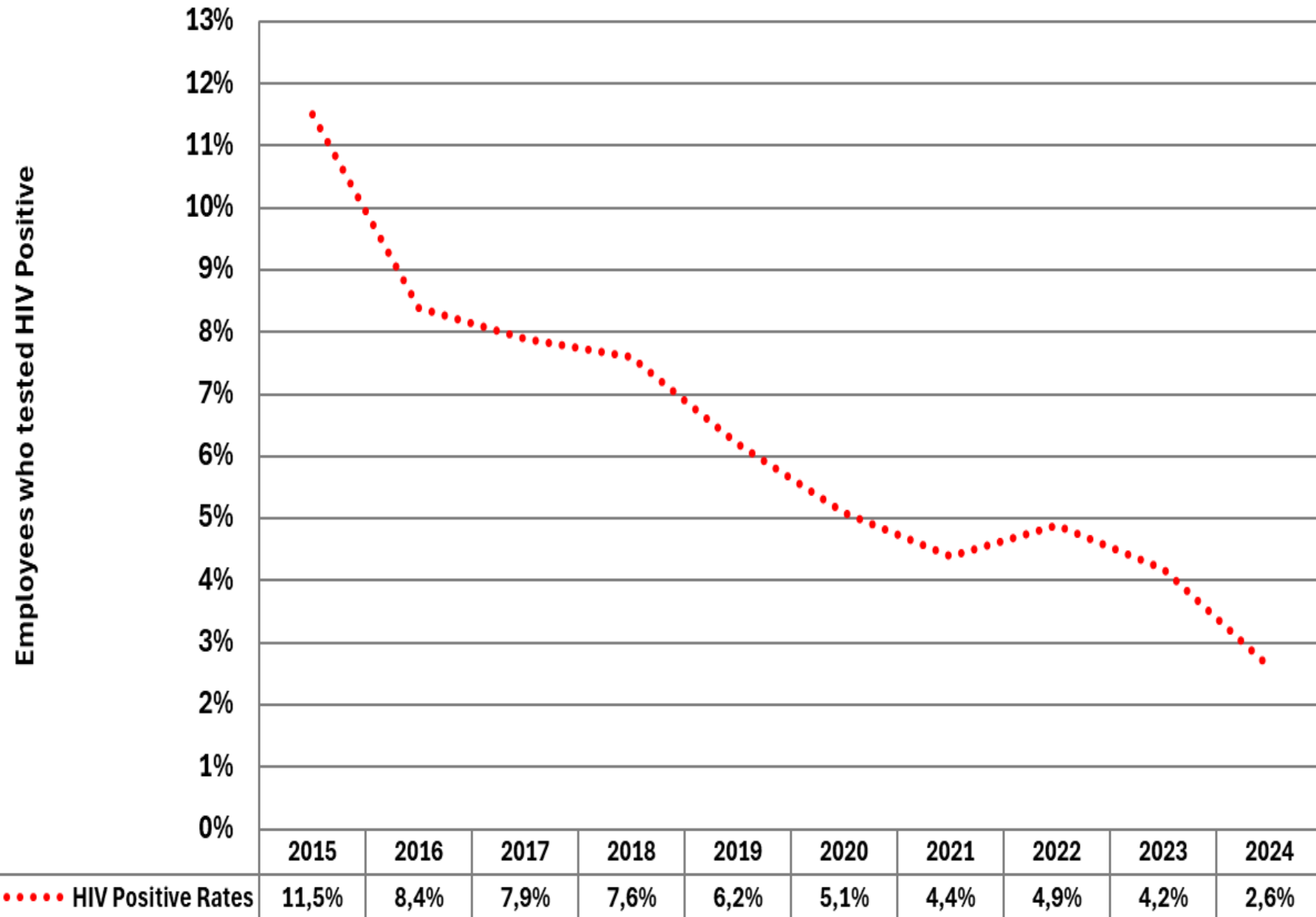
# SAMI HIV POSITIVITY RATE



The proportion of employees testing HIV positive declined substantially from 11.5% in 2015 to 2.6% in 2024.



Although a slight increase was observed in 2022, the overall trend indicates a sustained reduction in HIV positivity rates, reflecting improvements in HIV prevention, testing, and treatment programmes.



# TB INCIDENCE RATE: SAMI vs NATIONAL

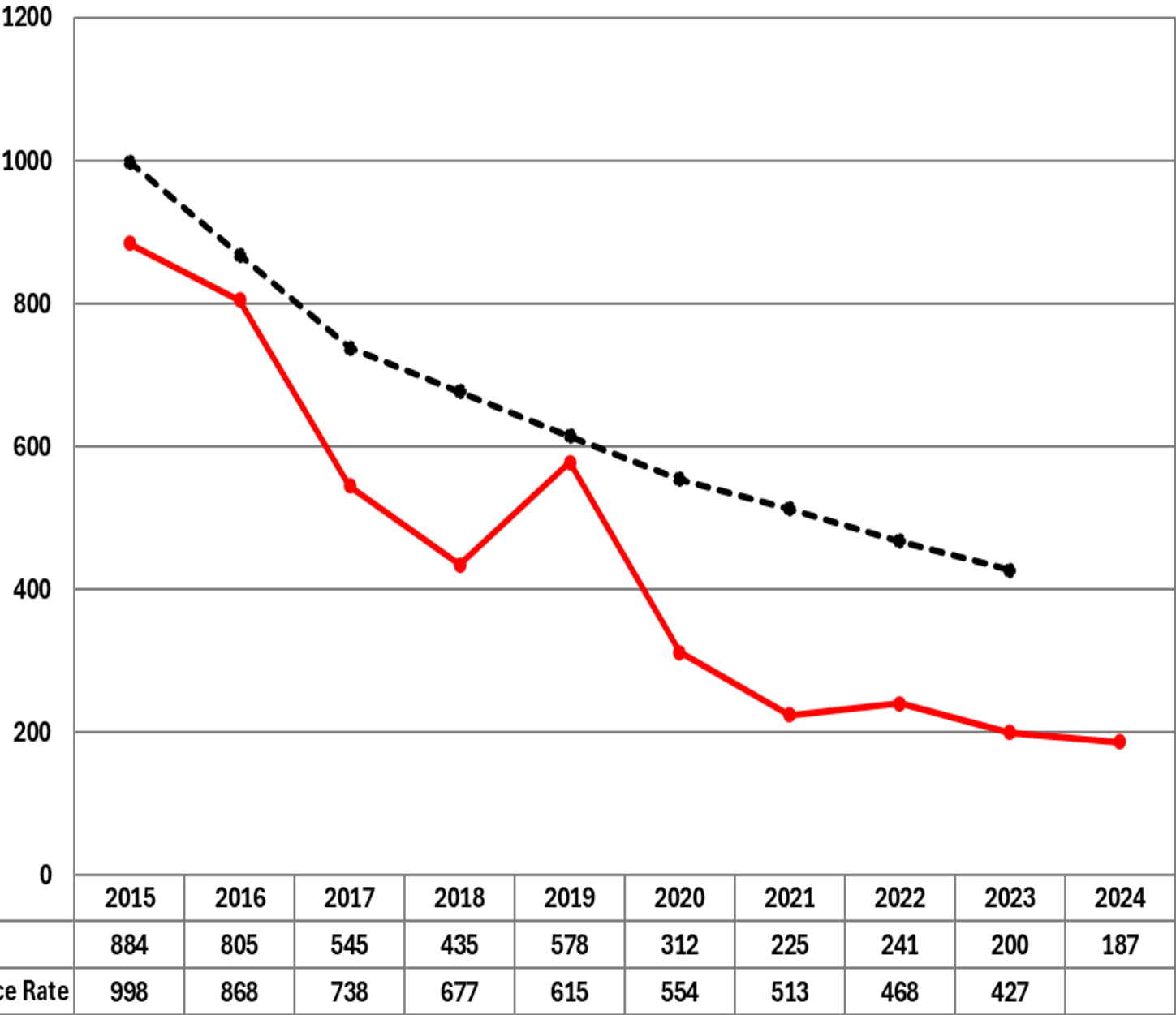


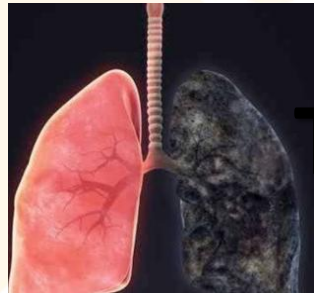
SAMI TB incidence rates have been below the National TB incidence rate over the decade.



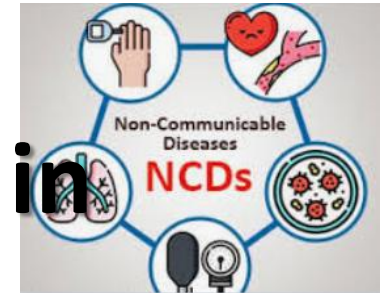
The lowest TB incidence rate recorded was in 2024 at 187 (per 100'000)

TB incidence rate (per 100,000 population)





# **“From Data to Action: The State of Occupational Health in SAMI”**





# THANK YOU



# GET TO KNOW THE PRESENTER

## Ms. Bridget Novolo



Ms. Bridget Novolo is a Statistical Analyst in Occupational Health with over 15 years of experience transforming complex health data into actionable interventions for employees. Her academic credentials comprise dual honours degrees: a BCom Honours in Mathematical Statistics from North-West University and a BSc Honours in Biostatistics and Epidemiology from the University of Pretoria. This foundation allows Ms. Novolo to integrate quantitative methodologies with tangible health outcomes in the South African mining industry, thereby informing strategic decision-making.

Beyond her analytical work, she has served as a State Member at MOHAC. Currently, she serves as State Convenor at CTAC and a member of both the Technical Tripartite Committee (TTC) and MRAC, shaping policy and standards.

Ms. Bridget Novolo's technical contributions in the SAMI were recently recognized with election as a Fellow of the Mine Ventilation Society of South Africa (MVSSA).

When not at work, Ms. Novolo gets her breath of fresh air and recalibrates through travelling.

**Every mine worker returning from work unharmed every day. Striving for zero harm in our lifetime.**



MHSC  
Mine Health and Safety Council