

# Evidence, Policy implementation progress and Future Directions: Addressing Non- Communicable Diseases in Nepal

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Dr. Uday Narayan Yadav is a Chronic Disease Implementation Scientist at the Australian National University. His research spans global health, Indigenous health, primary health care, and evidence-based policy. He has secured over AUD \$8 million in competitive research funding and authored more than 140 publications, establishing himself as a leading voice in advancing equitable health systems and tackling the global burden of non-communicable diseases



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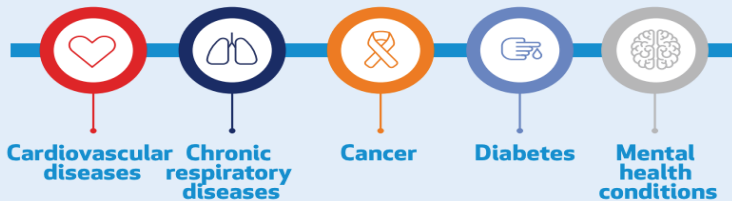
# Acknowledgment of Country



# Background

## NONCOMMUNICABLE DISEASES (NCDs) AND MENTAL HEALTH

### THE THREAT



#### Key Facts

NCDs are responsible for

**71%** of all deaths worldwide (41 million people)



Each year... the lives of

**15 million people** are cut short due to NCDs

Nearly **800,000 people** die from suicide

Every **2 seconds** someone aged 30 to 70 years dies prematurely from NCDs



Poorer people are disproportionately affected by NCDs and mental health conditions



#### 5 main NCD risks



Unhealthy diet



Tobacco use



Air pollution



Harmful use of alcohol



Physical inactivity

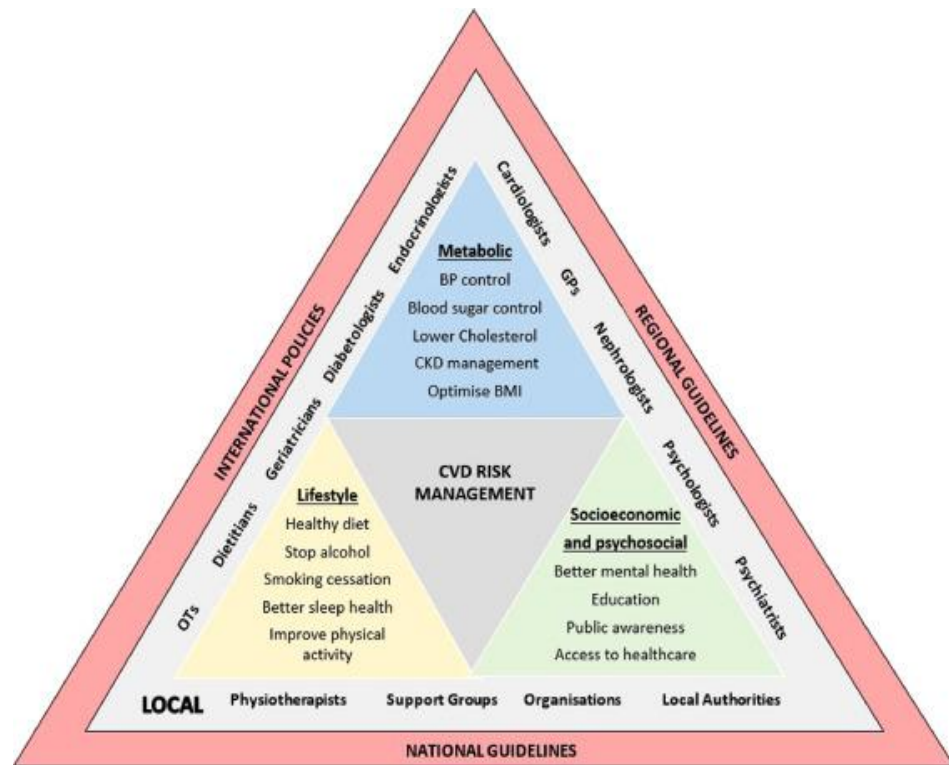
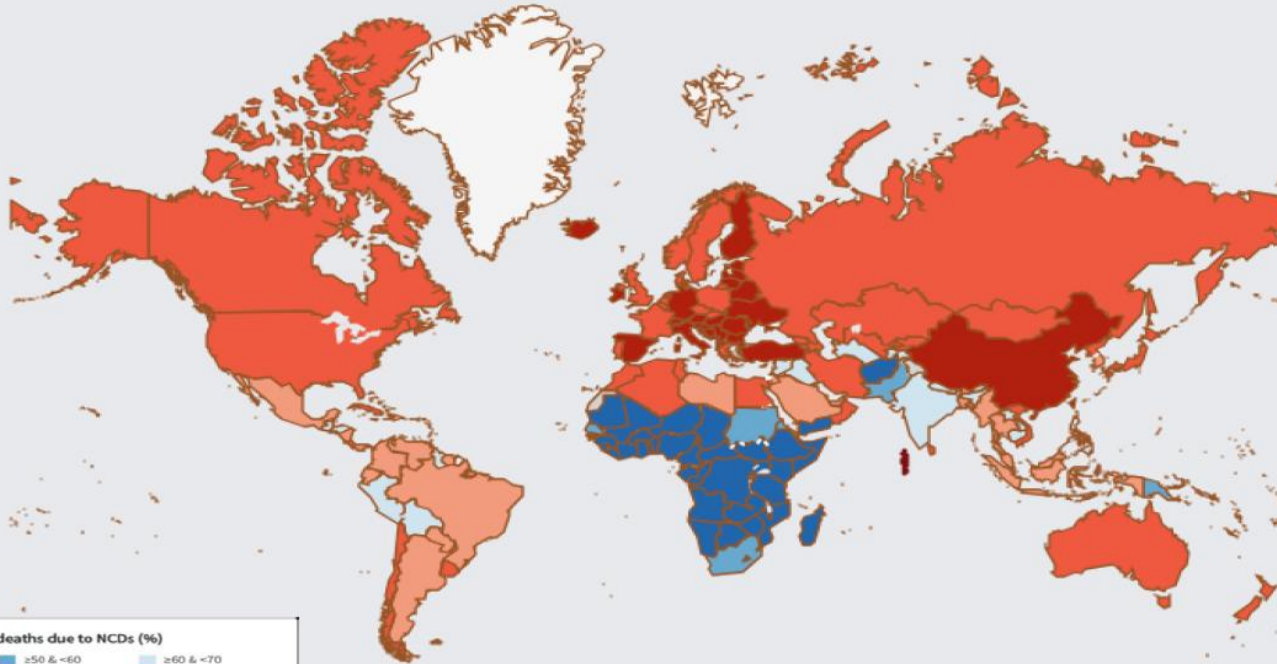


Figure 1 depicts the biopsychosocial model for modifying cardiovascular risk and the wider multi-disciplinary components essential for this (Fawzy AM, Lip GYH. Cardiovascular disease prevention: Risk factor modification at the heart of the matter. Lancet Reg Health West Pac. 2021 Oct 20;17:100291.)



# Percentage of total deaths due to NCDs, 2019

## Total



Percentage of total deaths due to NCDs (%)

**<math>< 50</math>**  
**<math>\geq 70</math> & <math>\sim 80</math>**  
Data not available  
**<math>\geq 50</math> & <math>< 60</math>**  
**<math>\geq 80</math> & <math>\sim 90</math>**  
Not applicable  
**<math>\geq 60</math> & <math>< 70</math>**  
**<math>\geq 90</math>**

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data source: World Health Organization  
Map production: Department of Noncommunicable Diseases  
World Health Organization



# Nepal



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**71.1%** NCDs related death which is increased from 63.7% in 2015

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Total Disability Adjusted Life Years (DALYs): **61.2%**

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Expenditure for health in terms of NCDs: **39.5%**

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Out of Pocket Expenditure: **40.3%**

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Risk actors like tobacco use, alcohol consumption, unhealthy diet, and physical inactivity driving the burden

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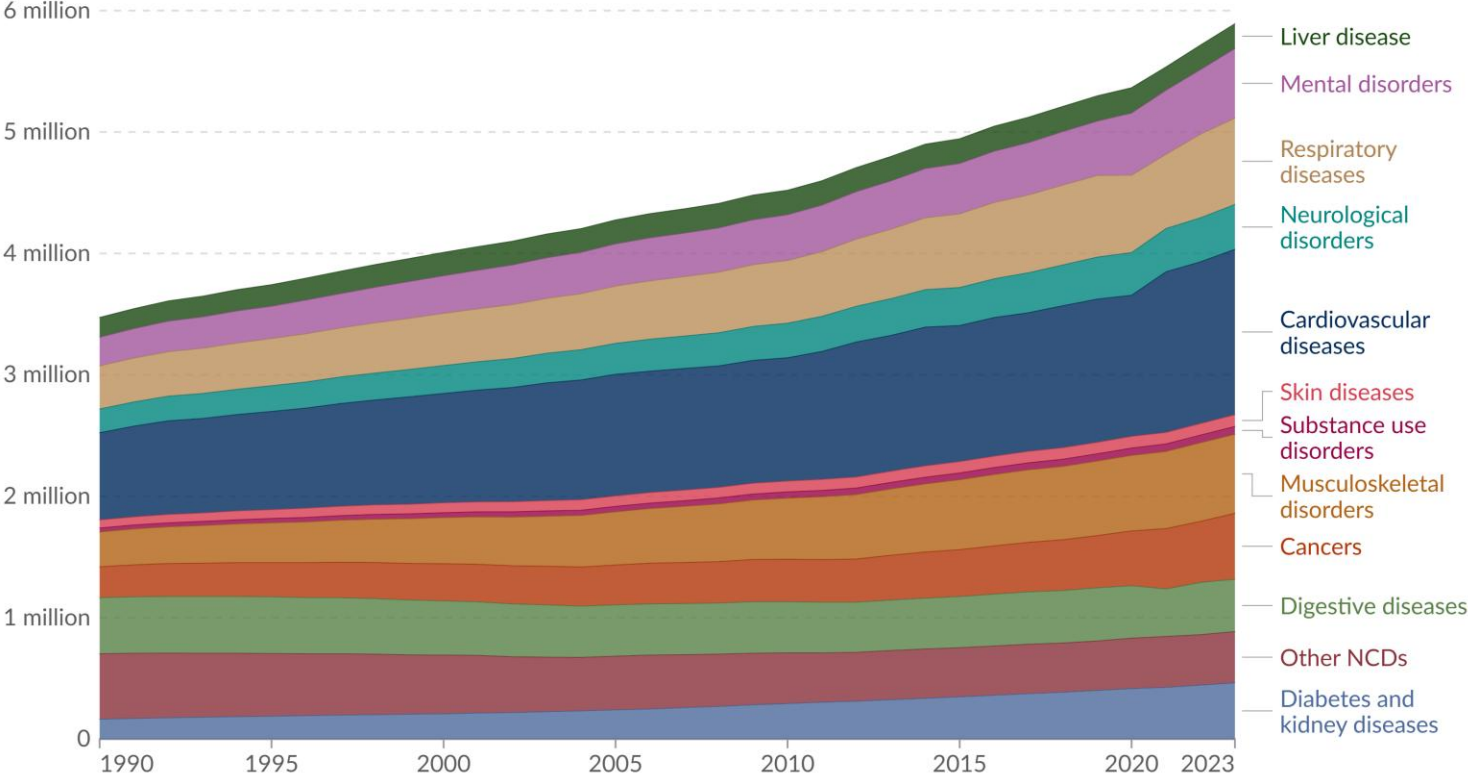
Poor quality of life, Poor self management practices, inadequate health literacy and limited empowerment

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# Disease burden from non-communicable diseases, Nepal



Total disease burden from non-communicable diseases (NCDs), measured in DALYs (Disability-Adjusted Life Years) per year. DALYs are used to measure total burden of disease - both from years of life lost and years lived with a disability. One DALY equals one lost year of healthy life.



2023 in DALYs lost	
Liver disease	205,333
Mental disorders	571,246
Respiratory diseases	711,117
Neurological disorders	370,440
Cardiovascular diseases	1.36 million
Skin diseases	96,686
Substance use disorders	64,802
Musculoskeletal disorders	649,819
Cancers	543,829
Digestive diseases	432,043
Other NCDs	420,648
Diabetes and kidney diseases	464,678
<b>Total</b>	<b>5.89 million</b>

Data source: IHME, Global Burden of Disease (2025)



# Policy initiatives for prevention and control of NCDs

UN Political Declaration on NCDs

Sustainable Development Goals(3.4)

Global Initiatives

UN Political Declaration on NCDs and promotion of mental health and wellbeing

2011

2014

2015

2016-2017

2018

2019-2020

2021

2025

Tobacco Control and Regulation Act 2011

Multisectoral Action plan for the prevention and Control of NCDS

National Health Policy

WHO PEN Package  
National Mental Health Policy

Multisectoral Nutrition plan(2018-2022)  
School Health and Nutrition Strategy-2018

National Health Policy  
National NCD and Mental Health Strategy-2020  
Province Health policy

Multisectoral Action plan for the prevention and Control  
PEN-Plus Program

National Air Quality Management National Plan

National Initiatives

Indicators	BAN	BHU	DPR Korea	IND	INO	MAL	MMR	NEP	SRL	THA	TLS	Fully achieved	Partially achieved	Not achieved
<b>1 National NCD targets</b>	●	●	●	●	○	●	●	●	●	●	●	10	0	1
<b>2 Mortality data</b>	○	○	○	●	○	●	○	○	●	●	○	0	4	7
<b>3 Risk factor surveys</b>	●	●	●	●	●	●	●	●	●	●	●	3	8	0
<b>4 National integrated NCD policy/strategy/ action plan</b>	●	●	●	●	○	●	●	●	●	●	●	10	0	1
<b>5 Tobacco demand reduction measures</b>														
5.a increased excise taxes and prices	●	○	○	●	●	●	○	○	●	●	○	2	4	5
5.b smoke-free policies	●	●	●	●	●	●	●	●	●	●	●	2	9	0
5.c large graphic health warnings/plain packaging	●	○	○	●	○	●	○	●	●	●	●	6	3	2
5.d bans on advertising, promotion and sponsorship	●	●	○	●	○	●	○	●	○	●	○	2	7	2
5.e mass media campaigns	●	○	●	●	●	○	●	○	○	●	●	4	3	4
<b>6 Harmful use of alcohol reduction measures</b>														
6.a restrictions on physical availability	●	●	NR	●	○	●	○	●	●	●	○	4	6	0
6.b advertising bans or comprehensive restrictions	●	●	NR	NR	●	●	NR	○	●	●	○	6	0	2
6.c increased excise taxes	●	○	NR	NR	●	●	NR	●	○	●	○	3	4	1
<b>7 Unhealthy diet reduction measures</b>														
7.a salt/sodium policies	○	○	○	●	○	○	○	○	●	●	○	2	2	7
7.b saturated fatty acids and trans-fats policies	○	○	○	○	○	○	○	○	○	●	○	0	1	10
7.c marketing to children –restrictions	○	○	○	●	○	●	○	○	○	●	○	3	0	8
7.d marketing of breast milk substitutes restrictions	●	○	○	●	○	●	○	○	○	○	○	3	5	3
<b>8 Public education and awareness campaign on physical activity</b>	○	○	●	●	○	●	○	●	●	●	○	6	0	5
<b>9 Guidelines for management of cancer, CVD, diabetes and CRD</b>	○	●	○	●	●	○	●	○	●	●	●	7	3	1
<b>10 Drug therapy/counselling to prevent heart attacks and strokes</b>	○	○	●	DK	○	●	○	○	○	●	○	3	0	7

Source: Noncommunicable disease: progress monitor 2022 (11) ● Fully achieved ○ partially achieved ○ not achieved NR No response DK Don't know

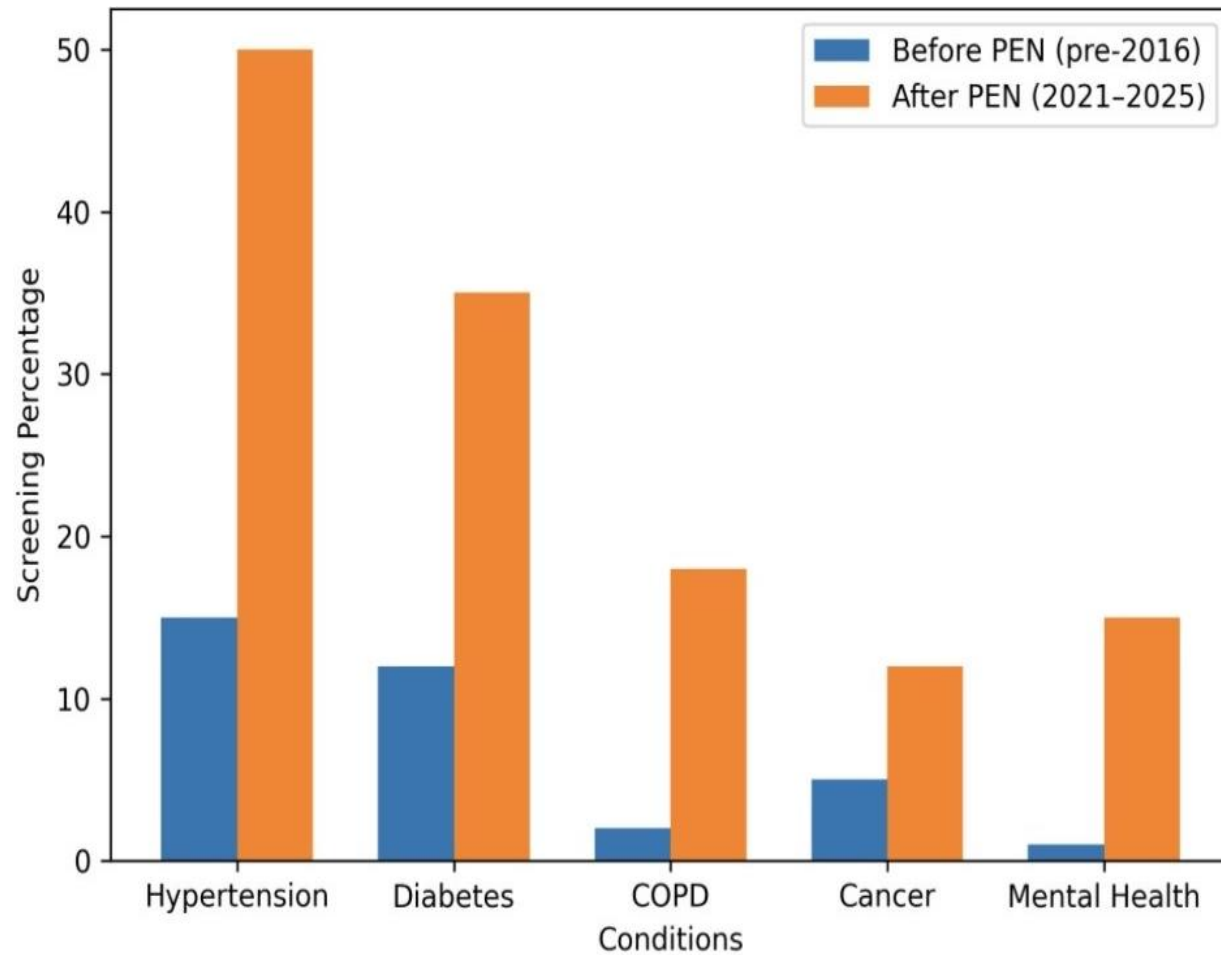




## Traffic-Light Dashboard – Nepal (Risk Factors vs SDG Targets)

Risk Factor / Conditions Indicator	Prevalence (2013)	Prevalence (2019)	Prevalence (2025)	SDGs Target 2030	Traffic light	Trend & Gap Analysis
Tobacco Use (all forms)	18.5	28.9	~30	Reduce by ~33%	● Red	Sharp rise, mainly smokeless tobacco; far off target .
Harmful Alcohol Use	7	6.8-7	~7	Reduce by ~33%	● Yellow	Stable; modest reduction needed.
Low Fruit & Vegetable Intake (<5 servings/day)	98.9	96.7	~95		● Red	Nearly universal deficiency; minimal progress
Low Physical Activity	3.5	7.4	~9		● Red	opposite trend
Overweight / Obesity (BMI $\geq 25$ kg/m <sup>2</sup> )	21	24.3	~26	Reduce / Stabilize ~20%	● Red	Rising steadily; opposite of SDG goal .
Raised Blood Pressure (Hypertension)	23.4	24.5	~25	Reduce by ~33% (~17%)	● Red	Rising steadily; early detection crucial
Raised Blood Glucose (Diabetes)	3.6	5.8	~6.5	Reduce by ~33% (~3.5%)	● Red	Rising steadily; early detection crucial
Raised Total Cholesterol (on medication)	~22.7	~11.1	~9	Reduce by ~33%	● Green	Good improvement; closer to target
NCD-related deaths (% of all deaths)	~60	~71.1	~70	Reduce premature mortality by 1/3	● Red	NCDs cause two-thirds of deaths; mortality reduction off track.
Quality of Care for NCDs (coverage of essential services)	~40	~45	~50	$\geq 80\%$ coverage by 2030	● Yellow	Some progress in hypertension/diabetes screening, but major gaps for other NCDs
Lifetime any Mental Disorder	~5	10	~12	Integrate into NCD care; reduce disability	● Red	Evidence shows rising burden; services limited, stigma high.





**IMPACT**





## KEY LEARNINGS FORM A CASE STUDY FROM KOSHI PROVINCE

Why Weak implementation at the primary health care level?

### Monitor

Monitoring and evaluation at provincial and local levels are minimal or absent.

### Sidelined priority

NCDs remain sidelined in provincial and local health allocations.

### Poor referral pathways:

Poorly established systems cause delays in treatment and worsen patient outcomes.

### Weak implementation site

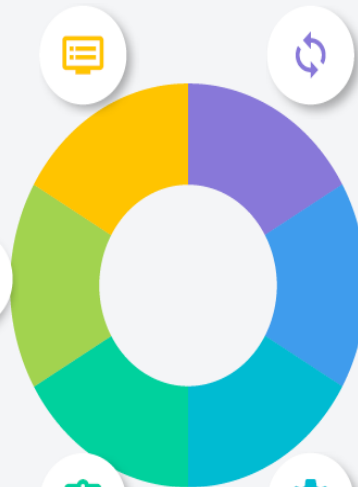
Primary health care facilities struggle to deliver even basic NCD services.

### Training gaps:

Programs remain overly theoretical, leaving health workers with limited practical, hands-on skills.

### Resource scarcity

Health posts and centers often lack diagnostics, medicines, and adequately trained staff.



*Missed prevention, late detection, rising costs, and widening inequities*



# Additional Unfinished Agenda

- Limitations in the implementation/enforcement of policies, legislation and regulation
- Addressing commercial determinants
- Limitations in the availability/access to NCD medicines and diagnostics
- High out-of-pocket and catastrophic health expenditure
- Climate change , air pollution and other hazards
- Meaningful engagement of and people living with NCDS, particularly people from disadvantage communities in designing and delivering the care



# Future Directions



01

**Prevent early,  
prevent upstream**

Invest in primary and primordial prevention that suits people need and context.

02

**Implement  
and Scale  
what works**

Accelerate implementation research to adapt and deliver cost-effective NCD solutions. .

03

**Go digital, go  
real-time**

Build a national Digital Health Hub for surveillance, self-management, smarter care, and follow-up

04

**Resource for  
equity**

Expand domestic funding and health insurance to protect and reach all.

05

**Deliver and  
learn**

Implement costed roadmaps /policy placemats to measure policy translation.

# Take home message



High proportion of sick population with are not just a health burden—they are an economic brake. Through innovation, collaboration, and evidence-driven action, we can build a stronger and healthier nation

# Thank you



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