

# Lifepath

HEALTHY AGEING FOR ALL



Lifepath: bridging science and policy  
to support healthy ageing  
through the lifecourse

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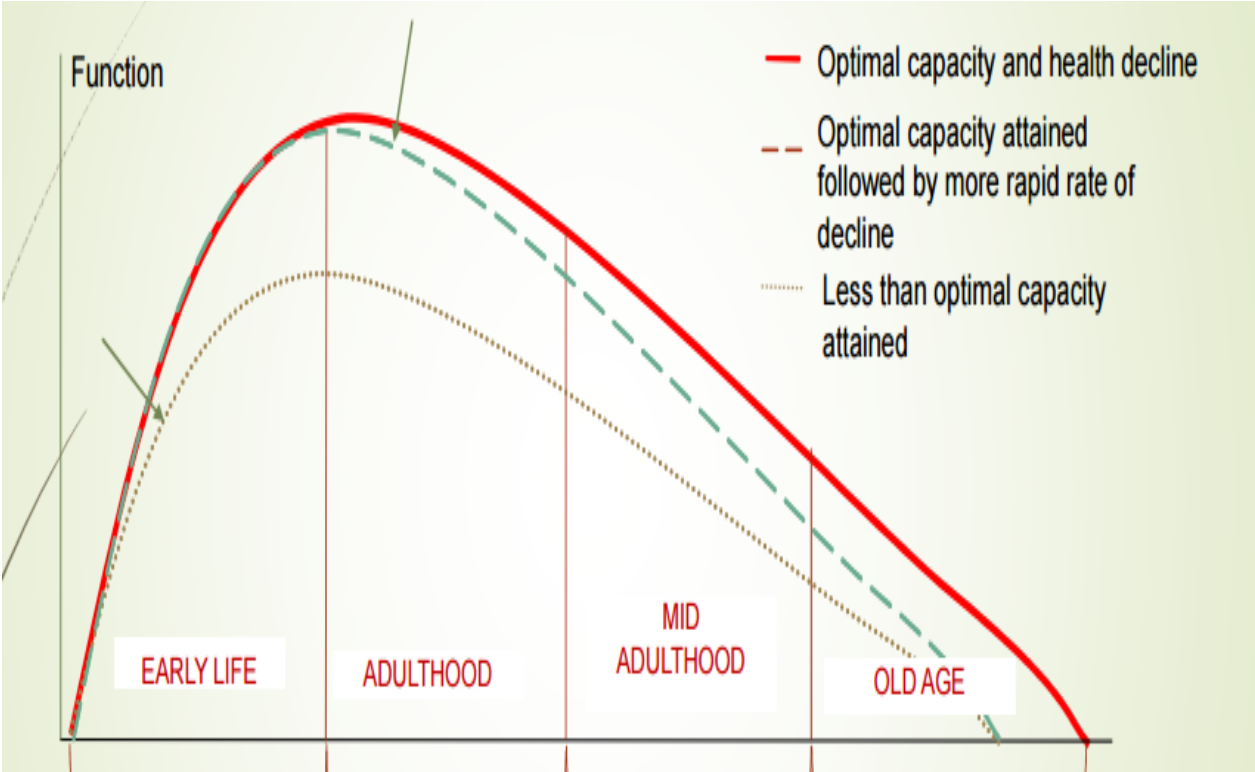
“Old age is meant to slow us down just before the final destination; otherwise reaching the stop would be too abrupt.

“ On Old Age”

— Lamine Pearlheart, To Life from the Shadows

## Lifepath Goals

- To show that healthy ageing is an achievable goal for society, as it is already experienced by individuals of high socio-economic status (SES)
  - To improve the understanding of the mechanisms through which healthy ageing pathways diverge by SES, by investigating life-course biological pathways using omic technologies
  - To examine the consequences of the current economic recession on health and the biology of ageing (and the consequent increase in social inequalities)
  - To provide updated, relevant and innovative evidence for healthy ageing policies (particularly “health in all policies”).
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# SOCIAL DETERMINANTS OF HEALTH

The social determinants of health are the conditions in which we are born, we grow and age, and in which we live and work. The factors below impact on our health and wellbeing.



Childhood experiences



Housing



Education



Social support



Family income



Employment



Our communities



Access to health services

Source: NHS Health Scotland

## Socio-economic status and healthy ageing – key policy messages

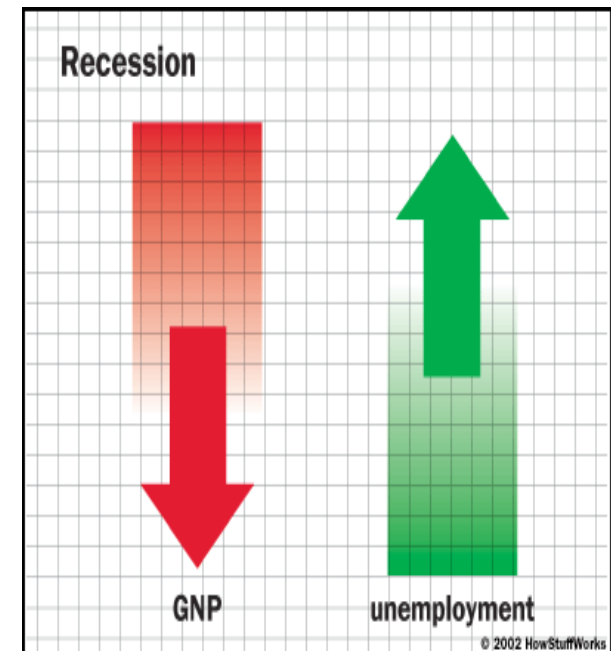
- Low SES is an independent risk factor after controlling for behavioural variables
- Smoking, diabetes, hypertension, physical inactivity & high use of alcohol also reduce life expectancy and later life functioning.

Mediating factor	Years of life lost (YLL)
Alcohol (high use)	0.5
Diabetes	3.9
Hypertension	1.6
Obesity	0.7
Physical inactivity	2.4
Smoking	4.8
SES	2.1

Table 1. Years of Life Lost associated with 6 major risk factors and low SES (Stringhini *et al.*, 2017).

## Effects of the 2008 Recession

- Increase in inability to afford basic goods led to increase in poor child health.
- No impact on health inequalities at a population level (underpowered?).
- Increase in suicide rates and poor mental health in countries that were particularly badly hit.



## Effect of interventions to reduce impact of low SES: Conditional Cash Transfers

### New York

- increased attendance at dental clinics but no impact on objective health measures
- follow up period, length and level of cash transfer

### Columbia

- increased contact with preventative care services for growth and development check-ups
  - improvement in diet
  - little or no impact on women's employment & understanding of caregiving practices
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# By mid/late adulthood we know that:

- Premature mortality disproportionately affects socially disadvantaged (Stringhini *et al*).
- Socially differentiated physical functioning observed (Stringhini *et al*).
- Socially differentiated inflammaging & physiological wear & tear has occurred (Castagné *et al* & Berger *et al*).
- Socially differentiated patterns of molecular biomarkers including epigenetic age acceleration (McCrary *et al*, Fiorito *et al*).
- Employees in higher occupational classes twice as likely to continue working beyond retirement age (Finland).

# By early adulthood we know that:

- Young adults with low SEP already show a higher biological risk compared to their more advantaged counterparts (Karimi *et al*)– this is likely to track forwards
- We know that this biological risk is exacerbated by health behaviours
- If they also live in deprived neighbourhoods this is likely to affect their biological health (Ribiero *et al*)
- The effects of early life social disadvantage on biology may amplify from early adulthood by 25 years (Kivimaki *et al*)
- Addressing social exposures & health behaviours early in adulthood can limit their long term effects & mitigate amplifications

# In childhood we know that:

- Socioeconomic disadvantage from birth leads to a higher BMI, and obesity (McCrorry *et al*)
- Socioeconomic disadvantage in early life is associated with epigenetic age acceleration by the age of 10y (Fraga *et al*)
- Early life social disadvantage has been associated with higher basal inflammation in adolescence (Fraga *et al*)
- The biological consequences of social disadvantage begin early, well before individuals have taken up health behaviours like smoking.
- Point towards the major problem of the obesogenic & pro inflammatory environment in early life & the need for its primary prevention
- That environment is characterised by stress-inducing social conditions (ACEs) as well as material deprivation & poor nutrition

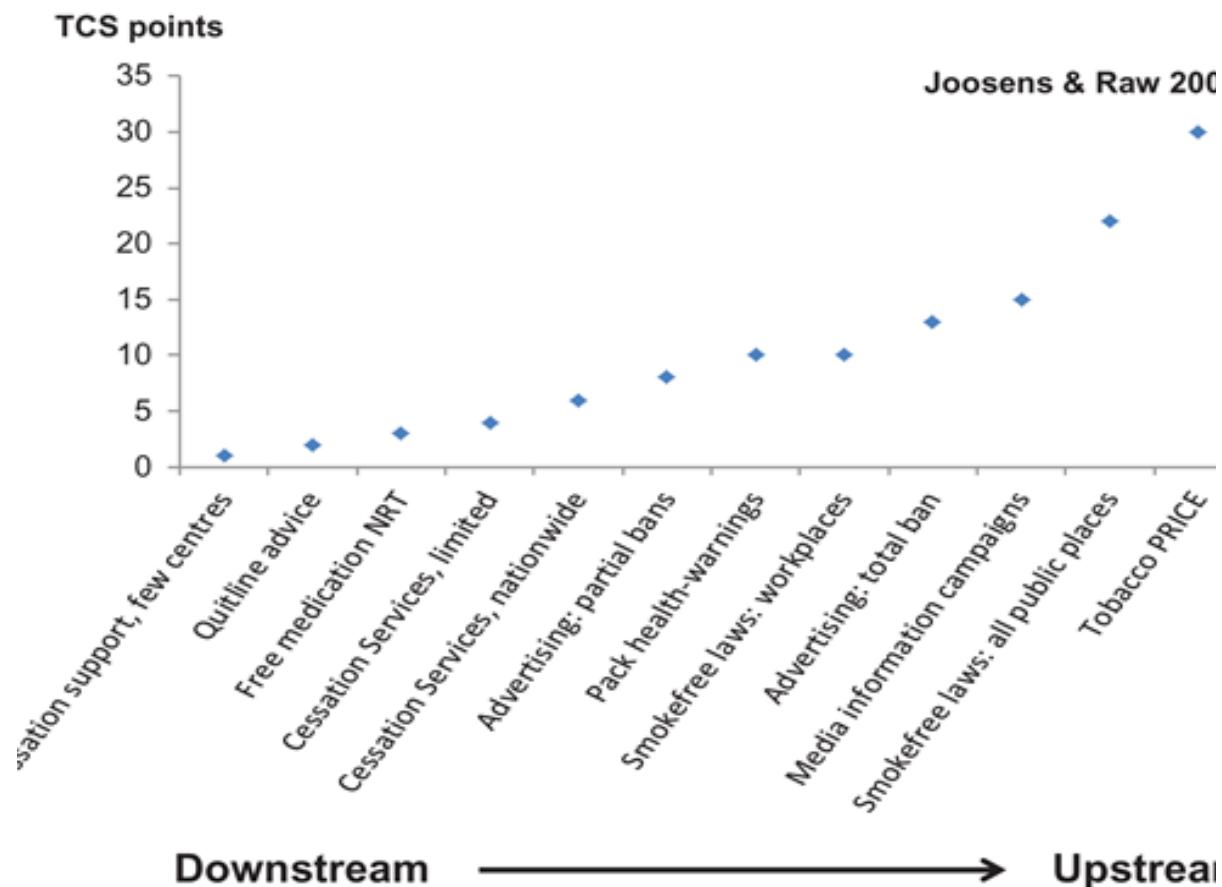
## Key policy messages – early childhood

- Positive role for increased education in health outcomes
- Negative role for adverse childhood experiences, related to subsequent poor health behaviour
- Tackle disadvantage to improve health behaviours, to reduce ACE and to improve education levels.
- Tackle childhood obesity at the earliest opportunity to prevent adult obesity and reduce cancer incidence

*“...children from lower SES backgrounds accrete fat mass more quickly than their higher SES counterparts; are more likely to be obese at any age; are more likely to become obese if previously non-overweight; and are more likely to maintain obese status over time. They are quite literally carrying a heavier disease burden across the life course.”*

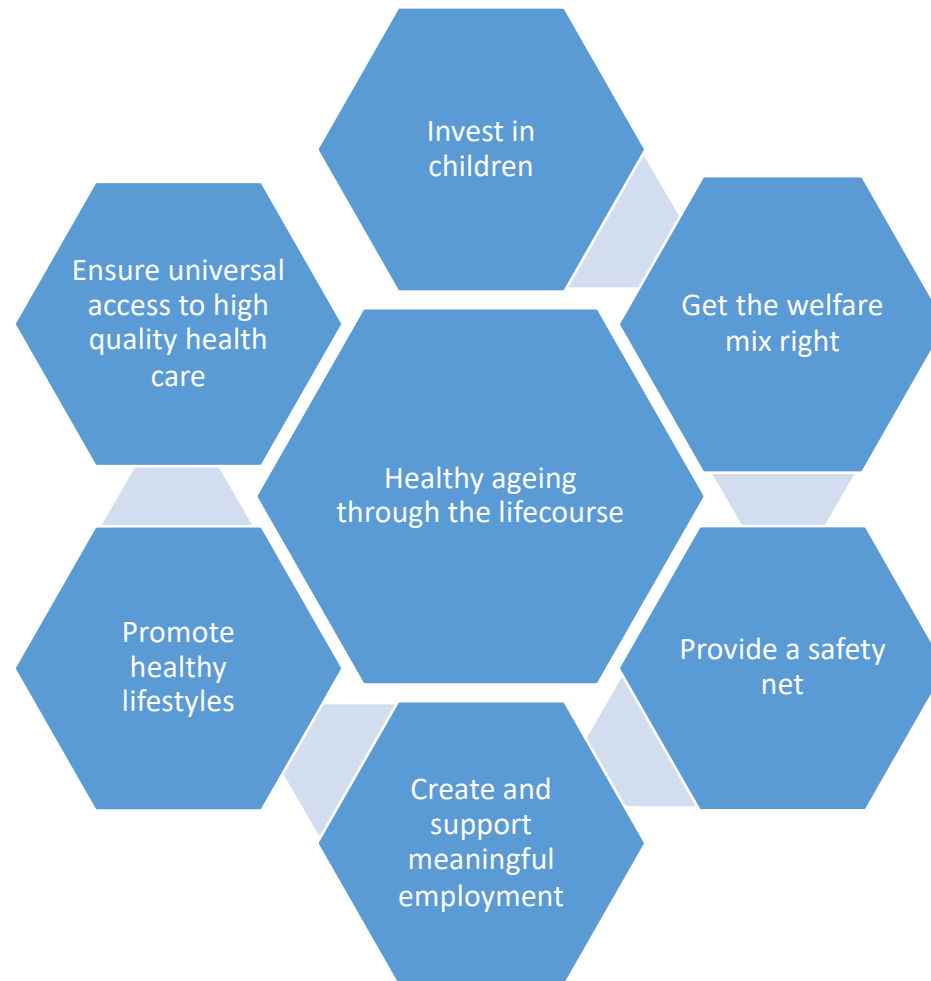
“Downstream” prevention interventions targeting individuals consistently achieve a small public health impact than “upstream” policies such as regulations or taxes.

Capewell & Capewell JPH 2017 39 1



	Early years 0-4	Childhood 5-18	Working age 19-66	67 years +
Universal	Universal health care	Universal health care	Universal health care	Universal health care
	Child benefit (UK)	Child benefit (UK)		State pension
	Immunisation	Immunisation		Winter Fuel Payments (UK)
		Universal education		
			Health&Safety/Occupational Health	
	Smoke free public places	Smoke free public places	Smoke free public places	Smoke free public places
	Smoke free private cars with children in	Smoke free private cars with children in	Smoke free private cars with children in	Smoke free private cars with children in
	Sugar tax	Sugar tax	Taxes on alcohol, tobacco and sugar	Taxes on tobacco, alcohol and sugar
	Ban on hydrogenated trans fats	Ban on hydrogenated trans fats	Ban on hydrogenated trans fats	Ban on hydrogenated trans fats
	Food labelling – calories, traffic lights	Food labelling – calories, traffic lights	Food labelling – calories, traffic lights	Food labelling – calories, traffic lights
	Promote active transport (walking, cycling)	Promote active transport (walking, cycling)	Promote active transport (walking, cycling)	Promote active transport (walking, cycling)
	Promote safe play spaces for children (indoor and outdoor)	Promote safe play spaces for children (indoor and outdoor)		
	Replace private transport with high quality public transport (trains, buses, light railway, subway)	Replace private transport with high quality public transport (trains, buses, light railway, subway)	Replace private transport with high quality public transport (trains, buses, light railway, subway)	Replace private transport with high quality public transport (trains, buses, light railway, subway)

Targeted at low SEP	Female children and CKD (Ireland) – what was the cause?		Conditional cash transfers	Flexible working practices which make work more attractive than retirement
	Provision of suitable housing (space and free of damp and pollution)	Provision of suitable housing (space and free of damp and pollution)	Provision of suitable housing (space and free of damp and pollution)	Provision of suitable housing (space and free of damp and pollution)
			Working tax credit (UK)	
			Job seekers allowance (UK)	
			Employment and Support Allowance (UK)	
	Social care (CYP)	Social care (CYP)	Social care (adult)	Social care (elderly)
			Universal credit (UK)	
	Emergency support during recessions	Emergency support during recessions	Emergency support during recession	Emergency support during recession
			Cold weather payments	Cold weather payments
	Free travel for under 5s		Travel payments for job seekers	Free bus travel





# Evidence-based strategies to minimise the impact of social hierarchy on health

## **Invest in children**

- Early childhood education for all children

## **Get the welfare mix right**

- Optimise balance between targeted and universal social protection policies
- Eliminate child poverty

## **Provide a safety net**

- Provide income support or tax credits
- Provide social housing

## **Implement active labour market policies**

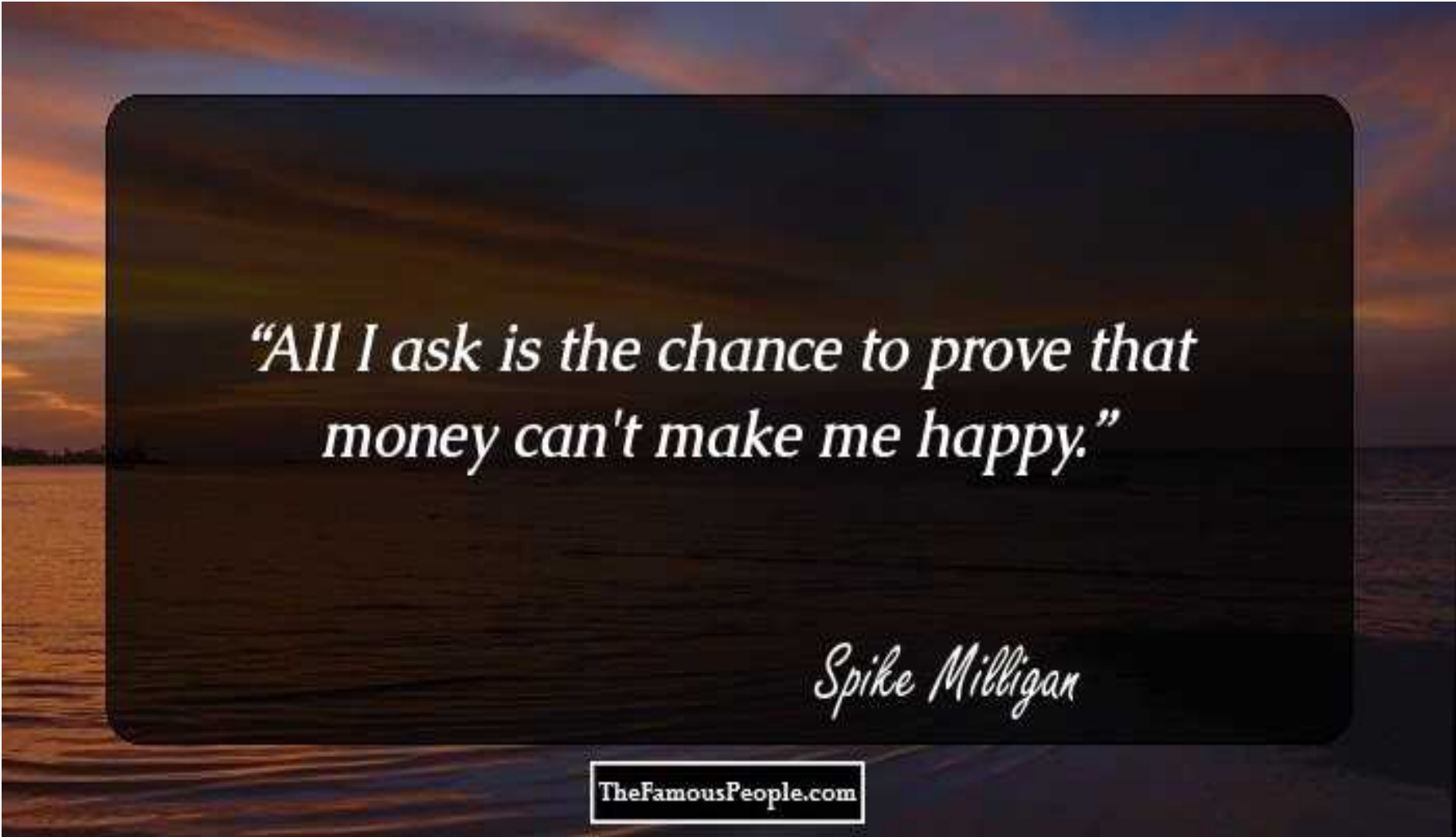
- Provide career development and on-the-job training
- Promote job security

## **Promote healthy lifestyles**

- Improve diets (subsidise fruit and vegetables, school meals)
- Provide green space and subsidised sport and recreation facilities

## **Ensure universal access to high quality primary health care**

- Subsidise practices serving high need populations
- Provide services free at point of use

A sunset over a body of water with a dark overlay containing text.

*“All I ask is the chance to prove that  
money can't make me happy.”*

*Spike Milligan*

TheFamousPeople.com

# Thank you

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