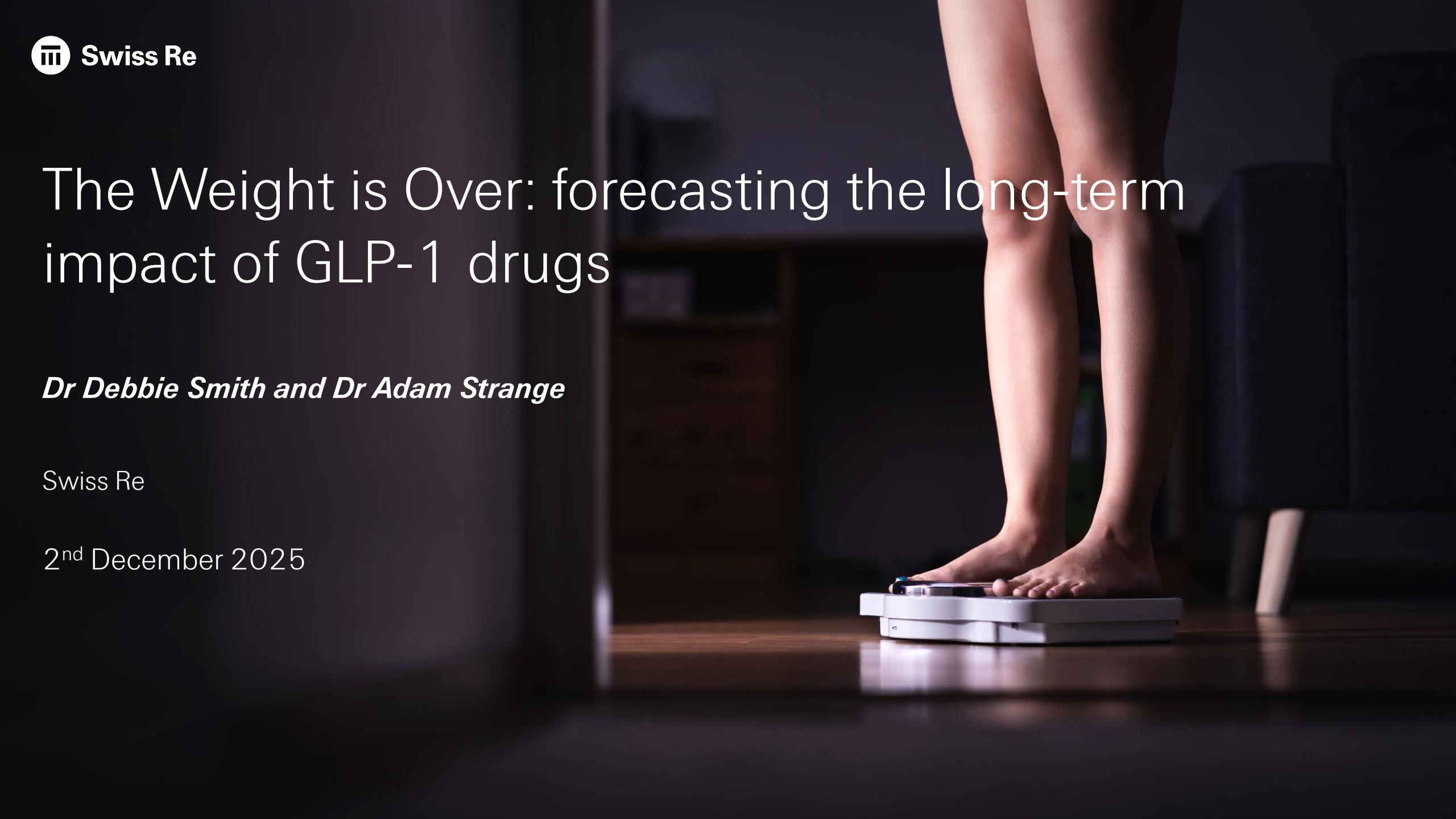


The Weight is Over: forecasting the long-term impact of GLP-1 drugs

Dr Debbie Smith and Dr Adam Strange

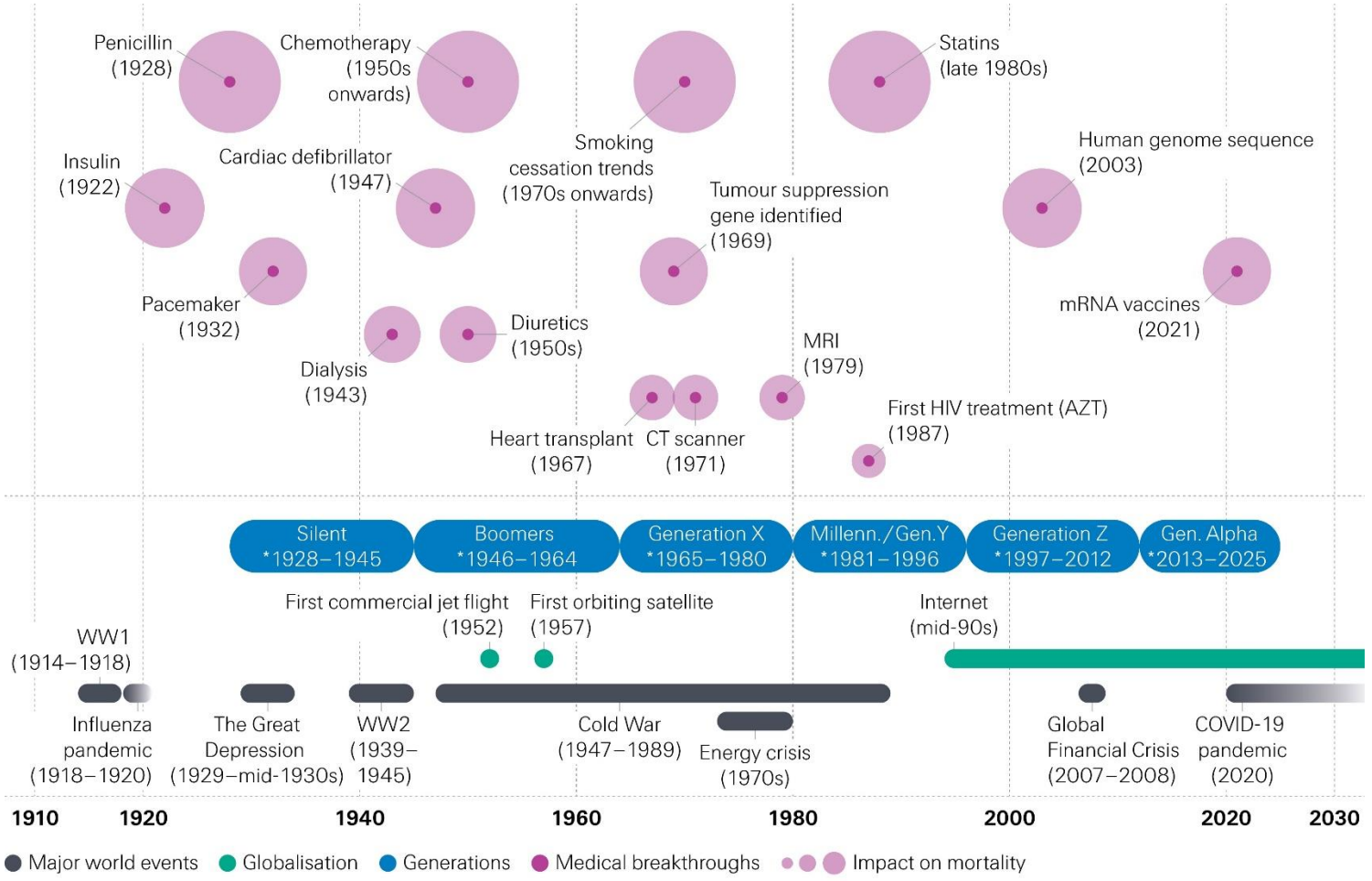
Swiss Re

2nd December 2025

A century's worth of progress and setbacks to extending lifespans

Great strides

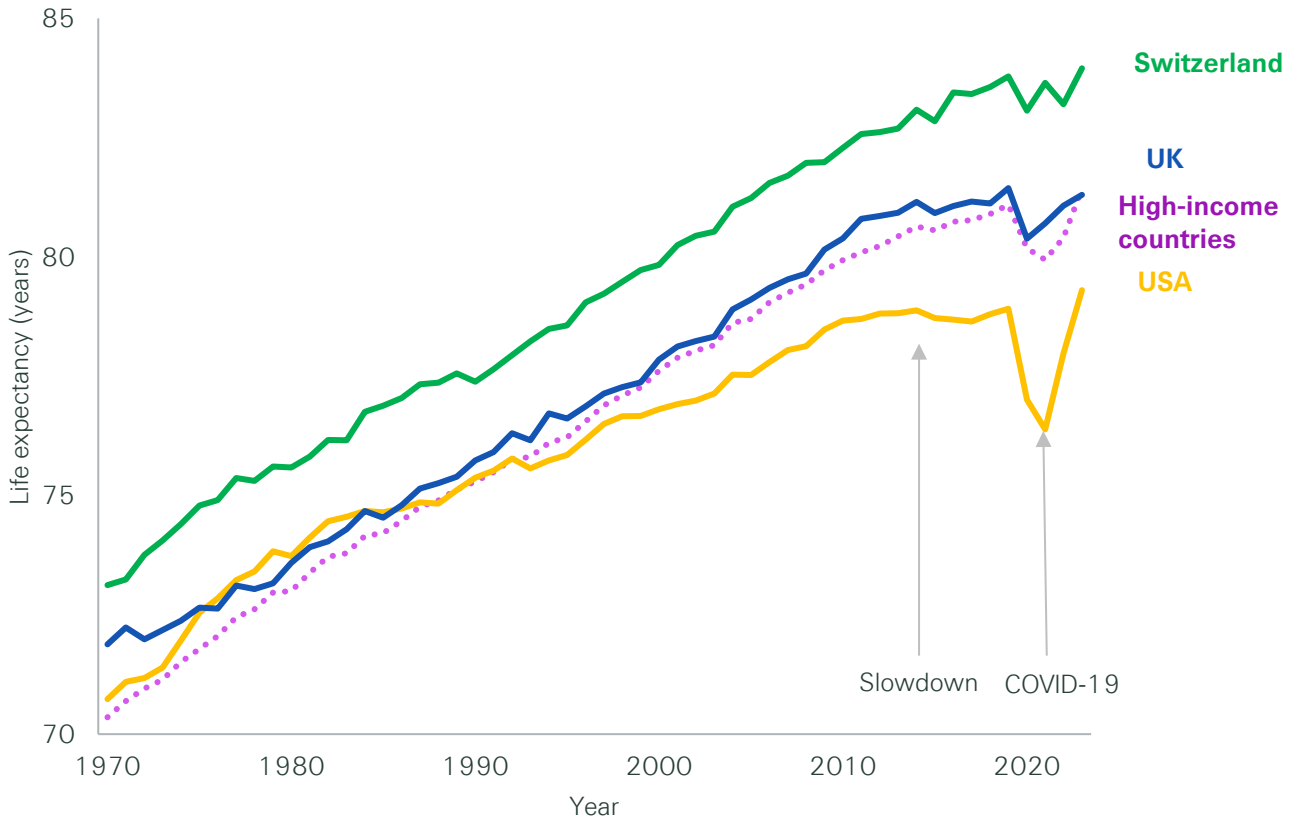
Disruptors



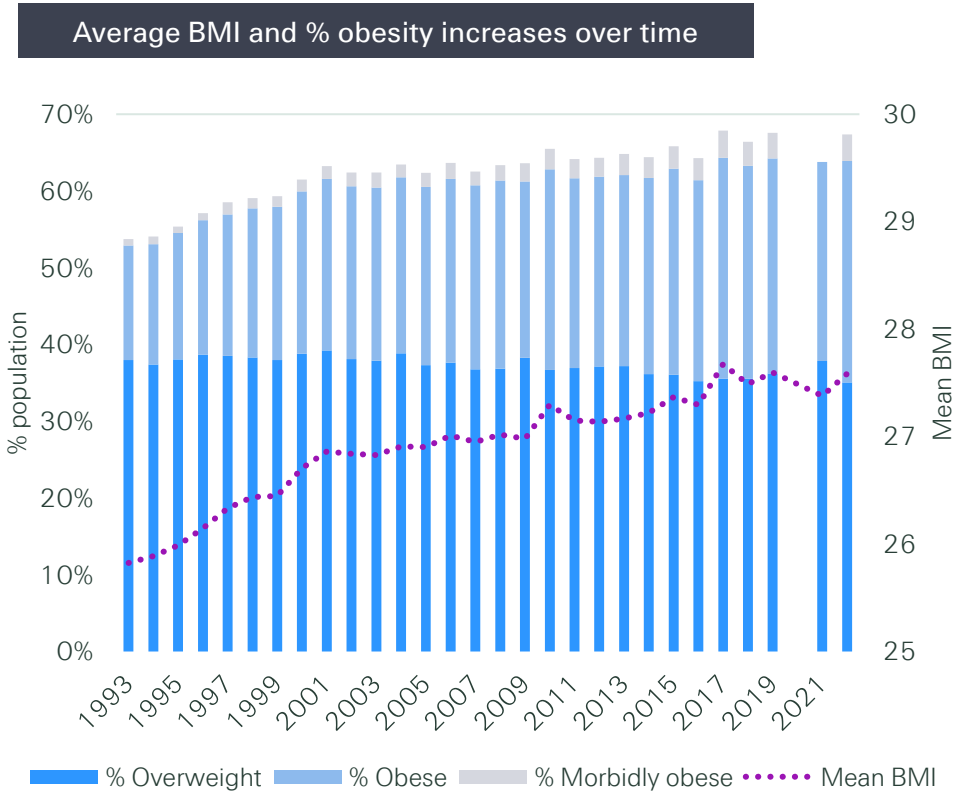
Source: The Future of Life Expectancy, Swiss Re

Life expectancy gains have been slowing; rising insulin resistance and BMI pose concerns for future improvements

Life expectancy



England obesity rate, 1993 – 2022



Source: NHS Health Survey for England

Source: Our World in Data, September 2025

The pathway of metabolic ill health doesn't have to lead to morbidity and mortality

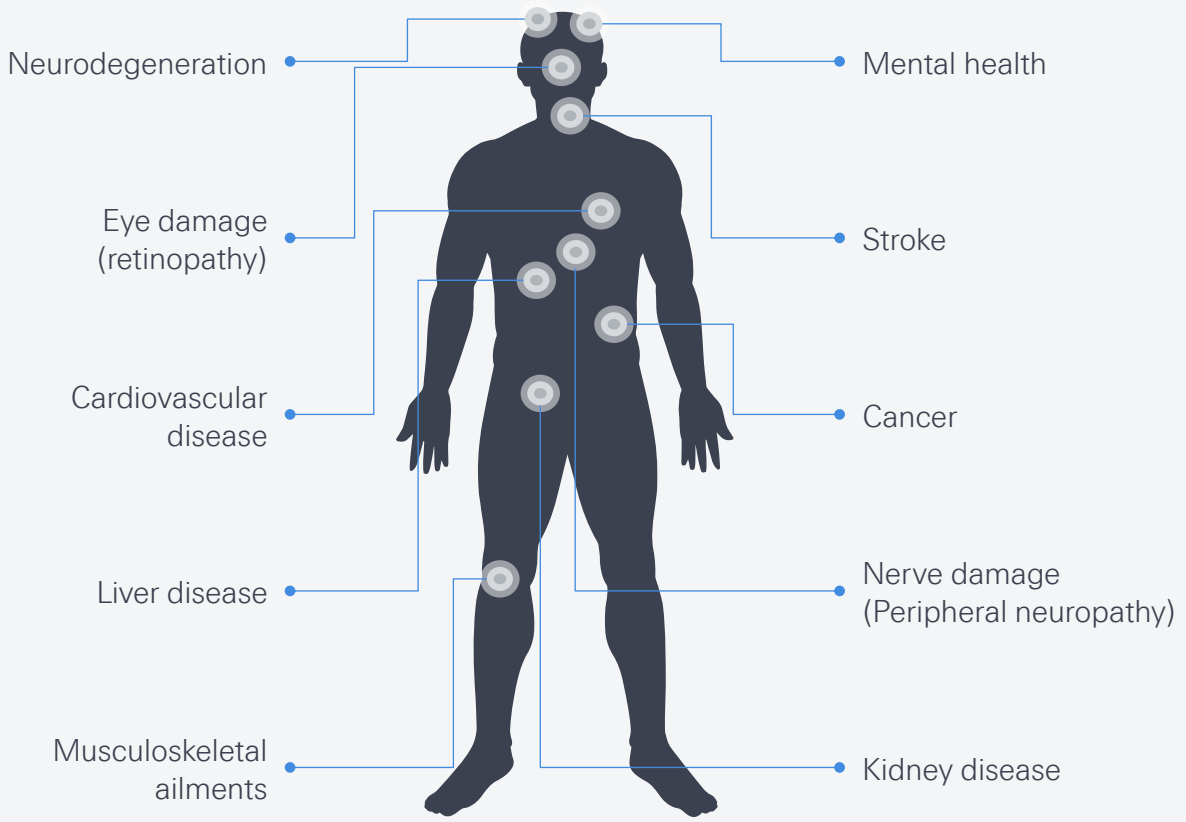
Growing mortality & morbidity risk

Unhealthy lifestyle choices	Persistent high blood sugar	Early signs of metabolic disease	Metabolic disease and related major diseases

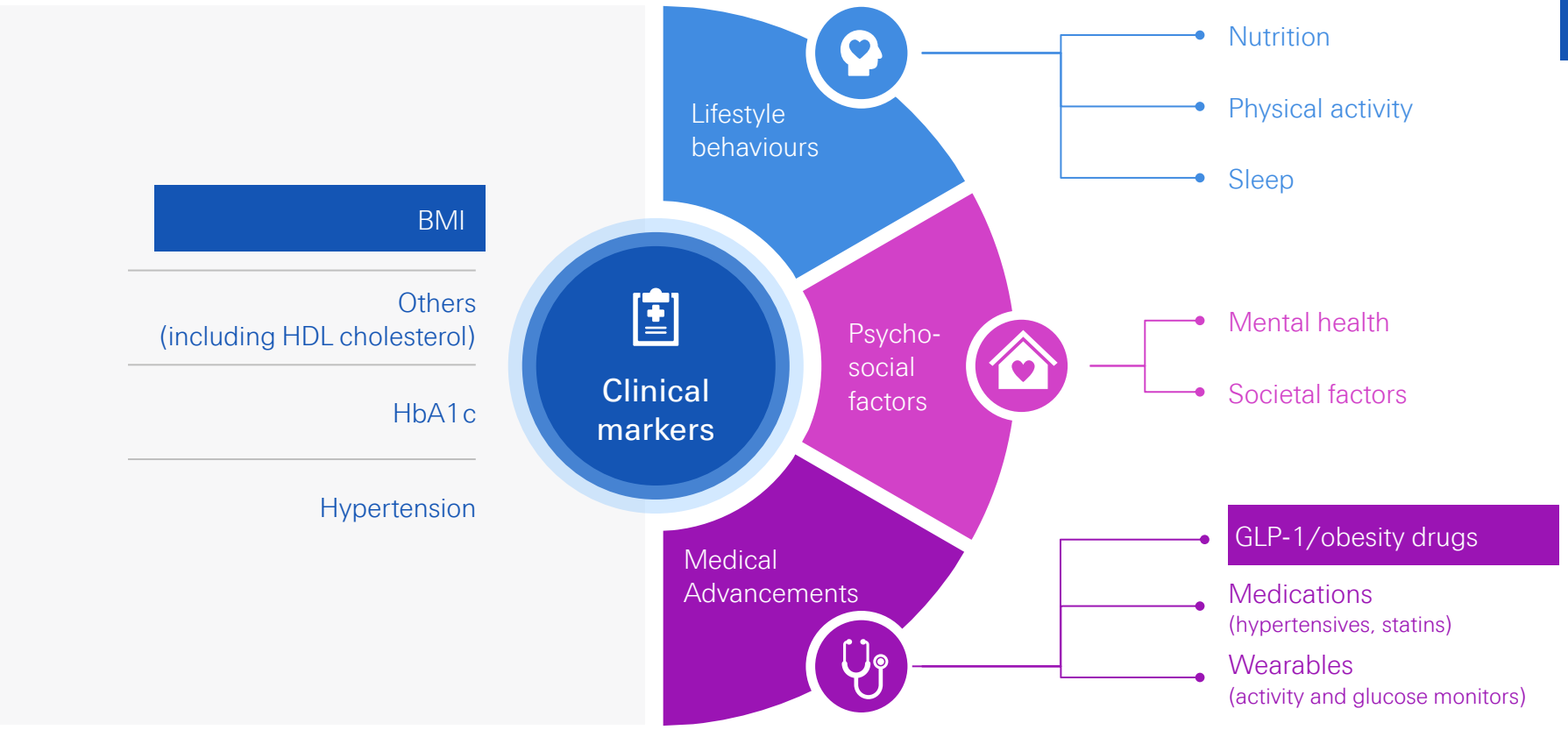
Risk is reversible

Swiss Re

Elevated disease risks from obesity



Swiss Re's metabolic health is an overarching term with a wide scope



Good metabolic health: the combination of **lifestyle behaviours, psychosocial factors and medical advancements**, shown by a healthy range in **clinical markers.**

GLP-1 drugs started out as a niche diabetes treatment but have become big business

Heavy guy, light appetite: this gila monster eats a few times a year, slowly digesting his food thanks to his naturally long-lasting GLP-1 hormone

CURRENTLY USED

Previous generation medications	***Ozempic/Wegovy*** Semaglutide (2021)  **Format**: once-weekly injectable	***Zepbound/Mounjaro*** Tirzepatide (2023)  **Format**: once-weekly injectable

How they work: slow gastric emptying, creating a feeling of satiety, reduce calories

Future trends in drug development

More targets: semaglutide: 1 target. Tirzepatide: 2 targets. New drugs: 2-3+ targets and/or combinations

Different doses: today the standard is weekly injections. Trials are for fortnightly or monthly injections. Daily tablets are in development

Fast weight loss: companies are targeting headline large losses of weight over as little time as possible

Promising short-term clinical trial results: long-term real-world effectiveness is pending

		Semaglutide (Ozempic/ Wegovy)	**Tirzepatide** (Mounjaro/ Zepbound)
In the head-to-head study over 72 weeks:			
Weight lost (kg)	↓	15.0	22.8
Weight loss (%)	↓	13.7	20.2
Waist circumference (cm)	↓	13.0	18.4
BMI points	↓	5.3	8.0

Additional improvements in blood pressure, HbA1c and blood fat markers were seen in both drugs but superior for tirzepatide

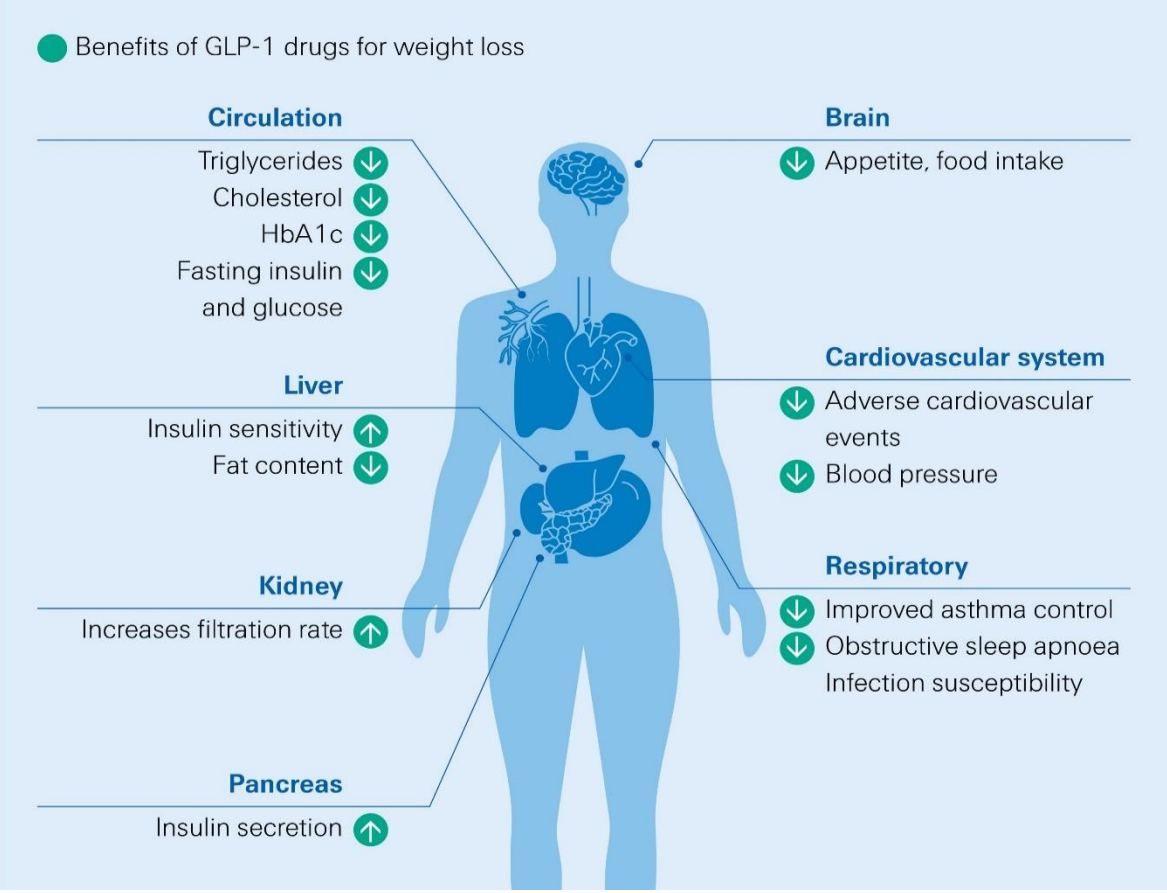
Tirzepatide beat semaglutide in every category

Between 39% (semaglutide) and 18% (tirzepatide) of all initial participants didn't lose ≥10% weight

Caveat: clinical trial results do not directly translate into real-world results. Longer-term considerations include drug adherence and sustained weight loss.

Source: SURMOUNT-5. Tirzepatide as Compared with Semaglutide for the Treatment of Obesity

Early signs: GLP-1 drugs impact several common risk factors for major causes of morbidity and mortality



All-cause mortality: 19% reduction in CVD patients

CVD: 20% lower risk major event in CVD patients

Other organs: early positive signs in some studies for patients with disease history

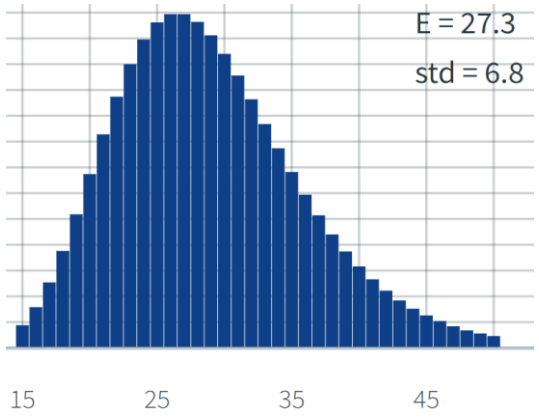
- Clinical trials are on unhealthy patients with high BMI and often with chronic diseases
- Lack of data on participants using high dose drugs for weight loss over the long term.

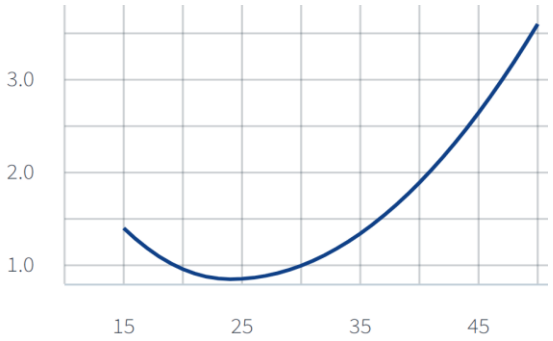
Swiss Re Source: SELECT. Semaglutide and Cardiovascular Outcomes in Obesity without Diabetes

Metabolic health model combines expert elicitation with comprehensive data

Data inputs

BMI **distribution** and **relative mortality** risk
by age, SES, country





Analysis process

Expert elicitation on BMI & GLP-1

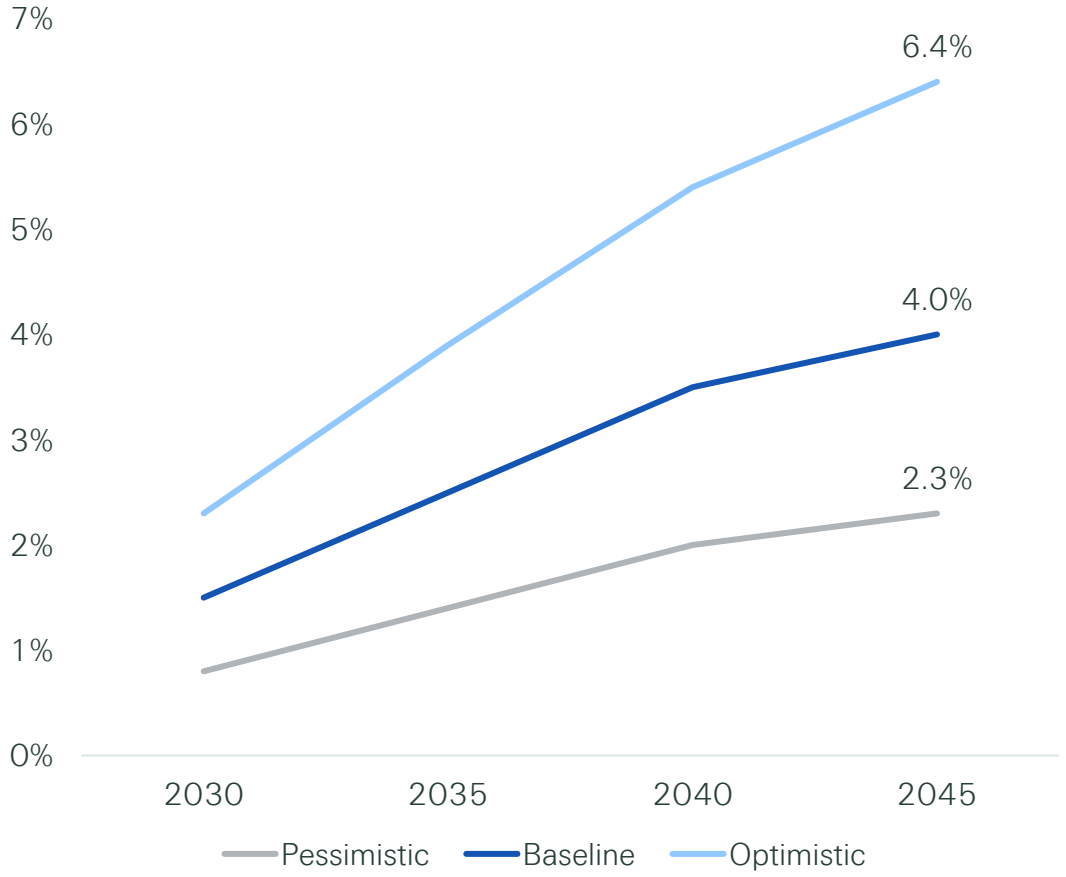
Literature review on all factors

Modelling output

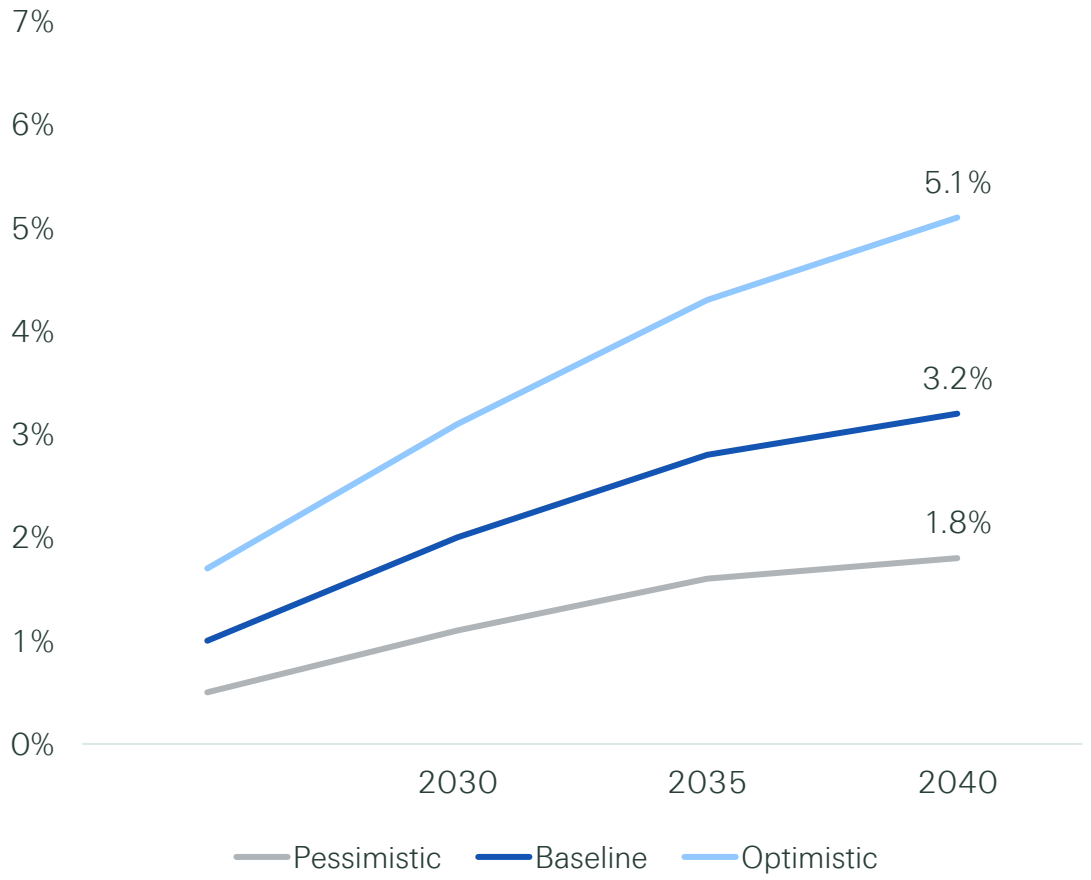
- **Population**: general and insured population
- **Countries**: US, UK
- **Timeframe**: 2025 – 2045
- **Scenarios**:
  1. Best estimate
  2. Optimistic
  3. Pessimistic
- **Methodology**: simulates 100k individuals with a given age, SES, BMI, SBP, etc.
- **Output**: aggregates total relative mortality risk distributions

General population: cumulative all-cause mortality reduction by 2045

US: 4.0% [2.3 – 6.4%]



UK: 3.2% [1.8 – 5.1%]



Challenges and unknowns associated with GLP-1 drugs suggest caution

Managing drug use

Discontinuation: 1/3 of patients after a month, 1/2 within 3 months, long before any benefits appear.

Muscle and bone: more than just fat is lost, perhaps 1/3 of weight lost is bone density and muscle – frailty concerns. New drugs seek to address this.

Lifestyle essentials: both exercise and diet are essential if we want to minimise reversal and regain. Currently little motivation to make these changes.

Ongoing considerations

Weight regain: numbers vary, regains of 33% – 50% seem average. **Some studies show net weight regain.** Weight regain would be fat.

Yo-yo use: will patients resume drug use after time? What does this mean over time? If weight returns, how much risk reduction will persist?

Accessibility: on-patent costs are very high which limits widespread access.

Insurance implications are positive in the short term

Life & Critical Illness

Sustained results may reduce all mortality including cancer & CVD

Obesity contributes to ~30 cancers, heart attacks, strokes

Disability/ Income Protection

Decline in obesity-linked claims over time

Enhanced MSK condition management

Workplace engagement & productivity

Medical/ Health

>95% use is self-funded

UK insurers now offering GLP-1 for in-force management

More clinician time needed for follow-up

Long term reduced need for investigations & procedures

Longer term implications

Pensions, Long Term Care, the *unknown unknowns*

Longer term considerations impact across the value chain

Business mix

Drug cost and access remains a barrier

May widen socioeconomic outcomes

Underwriting and Claims

BMI remains a widely used metric

Move to holistic assessments

Application vs claims mismatch

Anti-selection risk?

Actuarial assumptions

Reserving & pricing assumptions to be assessed

Monitor effectiveness & uptake

Examine mortality impact

Swiss Re IP Claim Deep Dive key stats

n=277

Reviewed by team of 6 doctors, clinical team, claims assessors, and actuaries.

Unselected sample, claim durations up to 5 years

1%	11%	10%	18%	60%
Underweight	Normal range	Overweight	Obese	No information available

Further drill down into 12+ month IP claim cohort.

KEY FINDING

From analysing co-morbidities, we concluded that in 18.4% of long-term IP claims obesity was the factor regarded as the PRIMARY DRIVER of claim

Obesity was not listed as a health condition in 75% of medical records reviewed.

Shifting visibility of obesity within health records

Underwriting and Claims

BMI remains a core metric

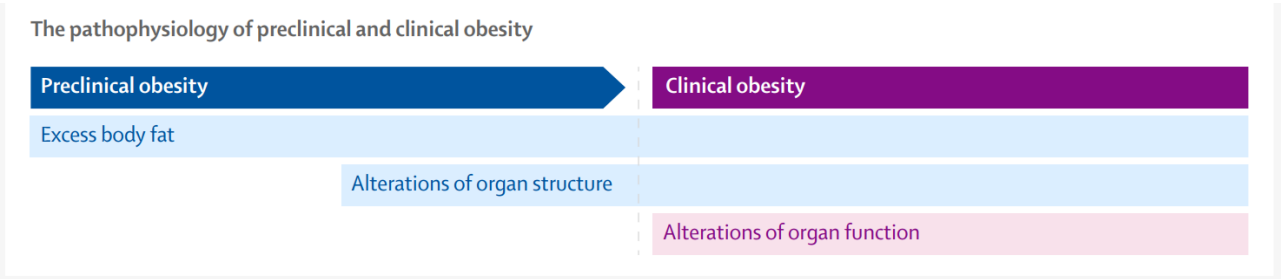
Missing data in records

Move to assessment of Metabolic dysfunction

Family doctors in UK register obese patients in return for QOF points

In 2022 the Health Survey for England data showed 29% obesity prevalence

In 2022 QOF obesity registrations were 11.4%



Traditional measurement of obesity vs new diagnostic method

#	1	2	3	4	5	6
BMI (kg/m²)	23.7	28.8	28.8	32.4	39.2	39.2
Excess body fat?	No	No	Yes	No	Yes	Yes
Muscle mass	Normal / High	Normal	Normal / Low	High	Normal / Low	Normal / Low
Signs and symptoms?*	No	No	No	No	No	Yes
Old diagnosis	No obesity	Overweight	Overweight	Obesity	Obesity	Obesity
New diagnosis	No obesity	No obesity	Preclinical obesity	No obesity	Preclinical obesity	Clinical obesity

Read the *Lancet Diabetes & Endocrinology* Commission on the definition and diagnostic criteria of clinical obesity online at: **www.thelancet.com/commissions/clinical-obesity**

The potential for a lifestyle first, bridging drugs concept in RTW programmes

Average clinical improvement across the 14 claimants:

		Average	Range
Weight lost (kg)	↓	7.2	1.6 – 24.4
Weight loss (%)	↓	5.6	1.6 – 12.3
Waist circumference (cm)	↓	4.4	-3 – 10
BMI points	↓	2.9	-1.4 – 9.3

Measurements were recorded at an average of 3 months following completion of programme with additional improvements in blood pressure and HbA1c readings, with some further ceasing diabetes and migraine medication.

5 RTW

£790,550
Total Reserve Released

£32,500
Total Cost of Programmes
(5 Residential, 7 Virtual, 1 Dietician-only)

86%
18 of 21 claimants accepted

Direct team has demonstrated excellent handling of referral discussion and subsequent case management.

State of the UK today – of GLP-1 use for weight loss

NHS today

Semaglutide and tirzepatide: tertiary weight loss clinic, one weight-related comorbidity, BMI of 30+ or 35+

Cost to NHS: £92 – £122/month

News over the summer: GPs in England to prescribe tirzepatide with BMI 40+ (or 37.5+ if Asian/ black background) and 4/5 of:

- Type 2 diabetes
- High blood pressure
- High cholesterol
- Heart/vascular disease
- Obstructive sleep apnoea

Looking ahead

Upcoming changes: June 2026: 4/5 conditions but BMI 35+.

April 2027: 3/5 conditions but BMI 40+.

NHS England expects: 220k people to be eligible over 3 years. 3.4 million people over 12 years (patent expiry)

Regional differences: Wales: specialty tertiary care. NI: regional obesity management to begin by 2028. Scotland: drugs rarely prescribed through specialist clinics.

Drug prices: substantial (~100%) increase in tirzepatide cost from manufacturer

Economic impact: SURMOUNT-REAL study to look at return to work

State of the UK today – of GLP-1 use for weight control and beyond

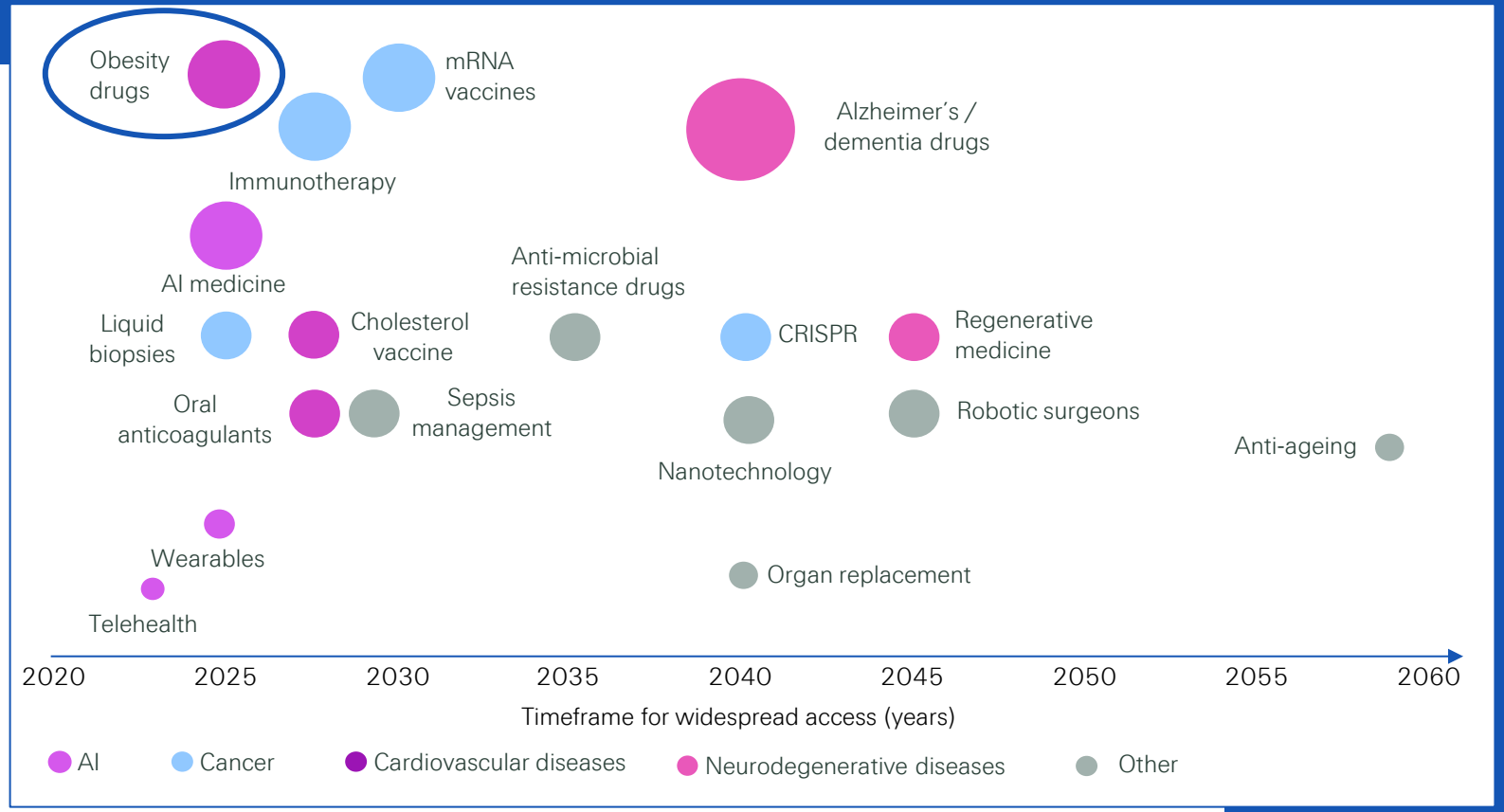
Looking ahead

- Reduction in liver disease from MASH (formerly known as Fatty Liver)
- Obstructive sleep apnoea (OSA)
- Chronic Kidney disease

Future use;

- Pre-emptive for high dose steroids
- Substance abuse disorder
- Neurodegenerative disease prevention?
- Psychiatric medications/psychiatric disorders associated with metabolic dysfunction

Outlook on mortality trends with further improvements on the horizon



- We expect medical advances alongside positive lifestyle choices to be a key driver of future improvements

- **Short term**
  Recent headwinds to mortality improvements. Can new medical developments make up for this?

- **Mid to long term**
  Likely more conservative than 20th century. However, the potential for incredible discoveries remains

Tech progress

Long timelines

Swiss Re is actively engaged in this space

Any questions?

Swiss Re

Thank you!

Contact us

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