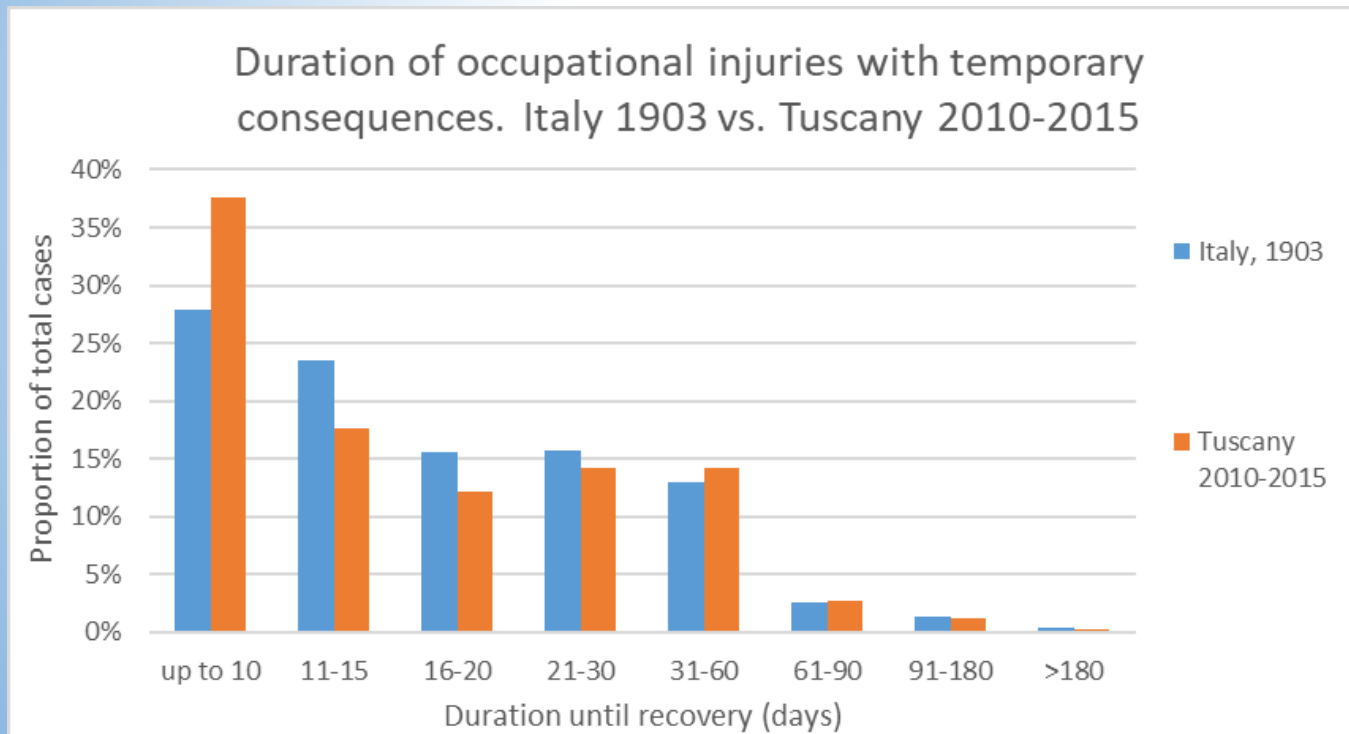


Burden of occup. injuries, Italy, 1890 - 2017

- Italian statistics for occup. Injuries: detailed data since 1884
- Social «distance» of Italy 2020 vs 1900 probably lesser than vs other areas GBD 2020
- Duration of injuries with temporary conseq. very similar in 1903 (*) vs 2015:



Proportion of severe lifelong disability ($\geq 20\%$ reduction of work capacity) almost identical:

1903 (*) = 1.94%

1990-98 = 1.90%

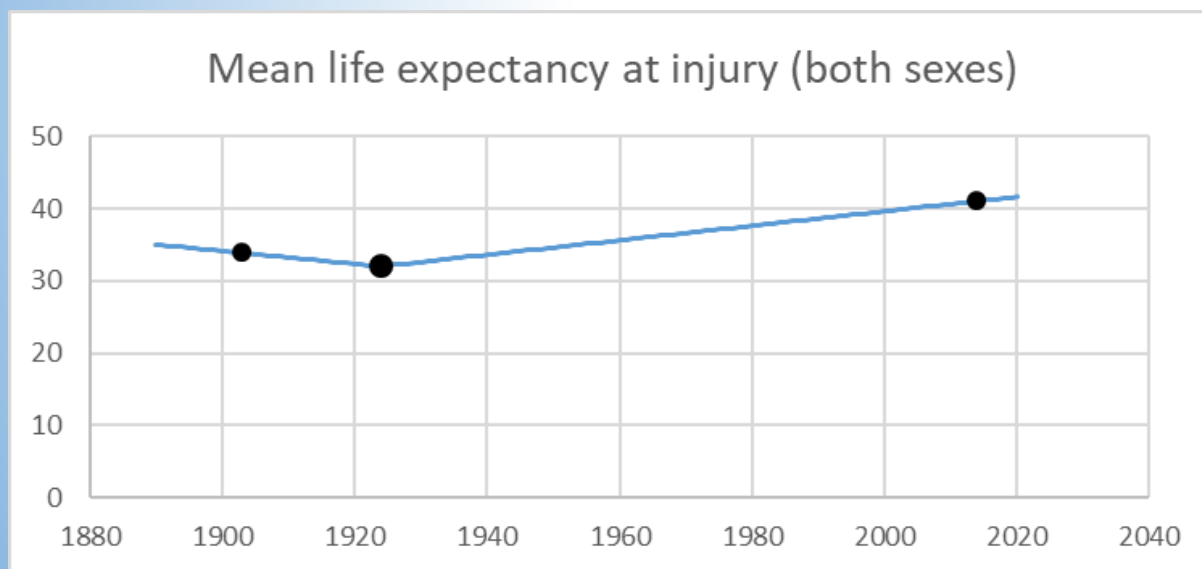
Fatal consequences:

1903 (*) = 0.75% (due to pre-antibiotic era?),

1990-98 = 0.11%

(*) R. ROMANO, *Sistema di fabbrica, sviluppo industriale e infortuni sul lavoro*, in Storia d'Italia, Annali 7, Torino 1984, pp. 1019-1055.

- In an incoming publication (*) we estimated mean DALYs for main compensation categories of occup. injuries:
 - Temporary disabilities 0.058 DALYs (pre-2001), 0.019 DALYs (2001 onward);
 - Permanent disabilities 1.97 DALYs;
 - Indemnified fatalities 40.6 DALYs
 - Fatalities not indemnified for lack of heirs entitled to compensation 52.6 DALYs (**)
- Long term variation of life expectancy at injury, known for 1904 and 1924-25



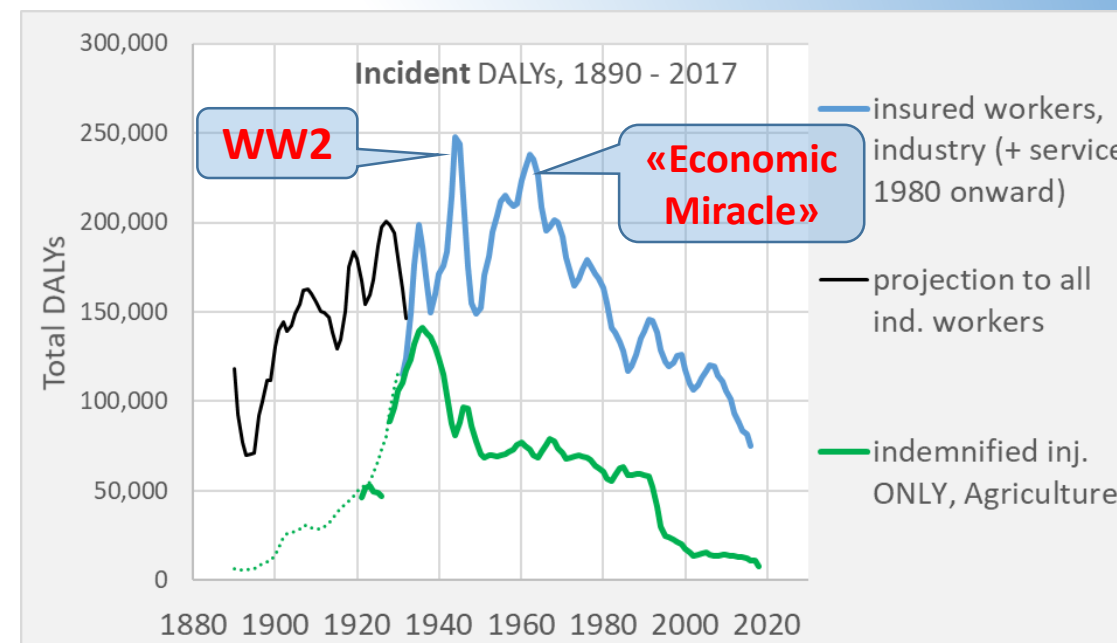
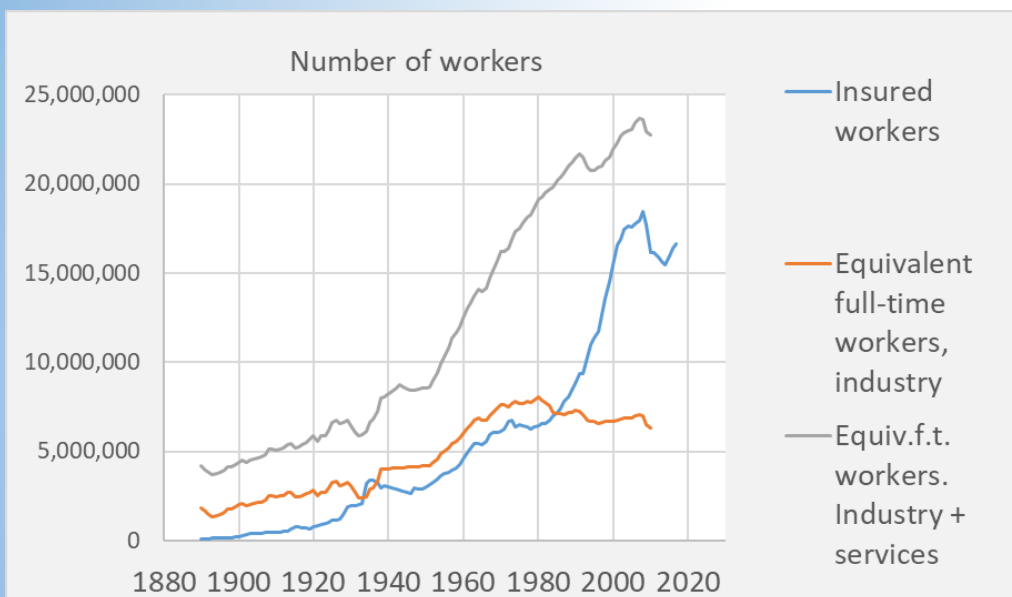
Possibility to calculate remote DALYS under hypothesis:

- no variation (present life expectancy),
- concurrent mortality (real life expectancy at time of injury)

(*) Epidemiol Prev 2020; 44 (2):263-270. doi: 10.19191/EP20.4.P263.056

(**) Italian occupational fatalities 1951-2000 need to be increased by 28% (# events) or 37% (DALYs) for cases involving younger workers without heirs entitled to compensation, not included in official statistics

N. employees: comparison of occupational (*) vs. insurance data show good coverage of industry workers 1930-1980, then followed by extension of insurance to service sector

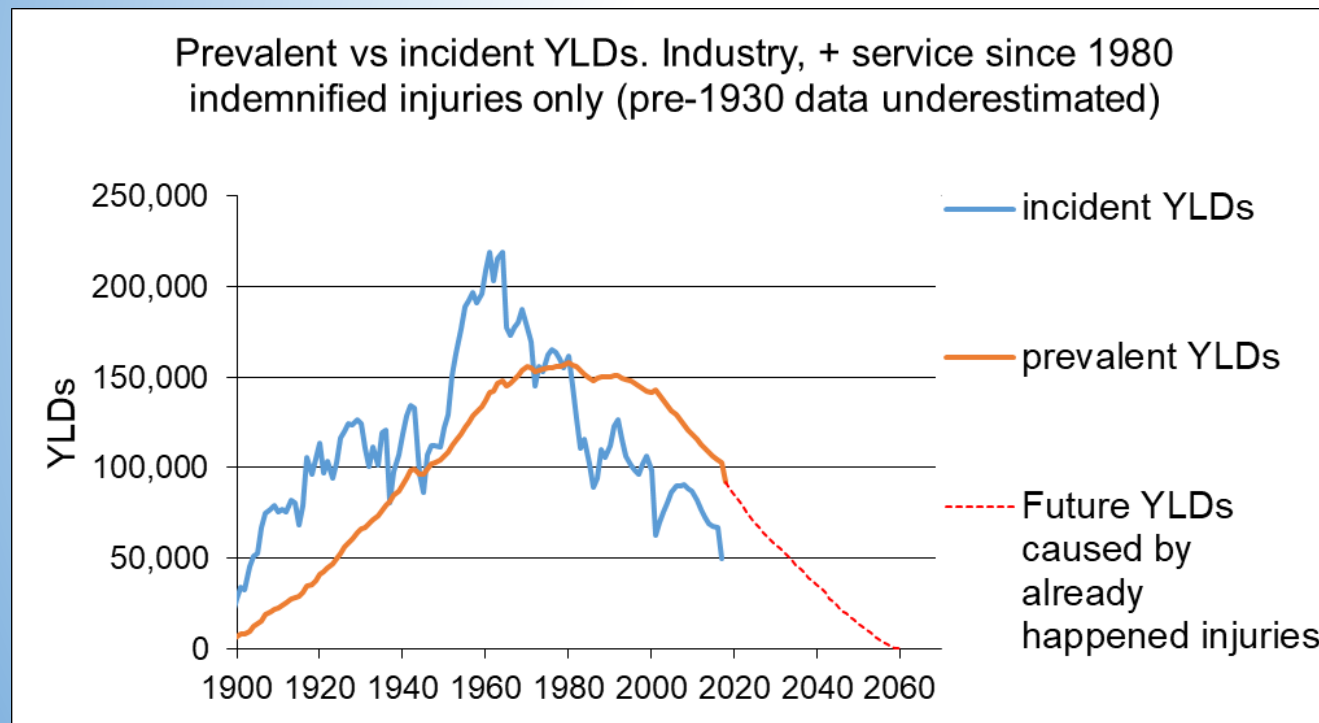


Incident DALYs (by projection to occup. data 1890-1930, then by census data)
 Note increase in war years (mainly YLLs) and early 60's: the «Italian economic miracle» was not cost-free. Agriculture data largely uncertain.

(*) Full-time equiv. workers, see E.Felice, Ascesa e declino. Il Mulino, 2015. https://www.mulino.it/edizioni/volumi/appendici/felice_appendicestatistica.pdf

Prevalent YLDs, a sum of effects distributed along 40+ years, begins to have some meaning around 1950, become “reliable” ten+ years later.

It suggests the heavy ballast of disability inherited from the past injuries.



The long distributed effects are capable to hide even well known dynamics, like the large increase of injuries in 1960-65

Effects of “prevalent” deaths (people that “would have been here” if injuries did not happen) could be studied, as a counterfactual, in models of economic growth

Open problems / perspectives

- Scarce data for Agriculture, very important in the past (1900: 2mln workers industry, 2.4 mln. services, **6.2 mln. Agriculture**)
- Need of additional data for:
 - age at injury (no easily accessible data for period 30's to 80's)
 - female workers: lower burden than males, but concentrated on very young girls (age 15-25) in 1900-1930 coherent with youth in productive work followed by «reproductive work». Lower female work participation in 60's-70's
 - Component of occupational injuries not covered by insurance
 - Workers insured with companies different from «Cassa Nazionale» in 1890-1933
 - Burden by single industry sectors
- Estimate of commuting injuries (heavy burden since 60's, census data avail. after 2001)

Never the less:

- DALY assessment is a powerful quantitative method for history of health
- Ideally, a complete run of GBD estimation for past periods, could offer a 360° panorama of health, a strong base for studies in social history