State of the Science for Research on Work and Health Disparities

SARAH BURGARD (SHE/HER)

UNIVERSITY OF MICHIGAN

Outline of this talk

Motivation: Why focus on work as a determinant of social disparities in health?

Starting point: Some focusing questions

Choices & challenges: Known challenges to filling knowledge gaps

Context: Additional considerations when mapping priorities

Why study work? Clear associations with health, clear opportunity for disparate experiences

Clear differences in health between those **working** (for pay) **vs not**
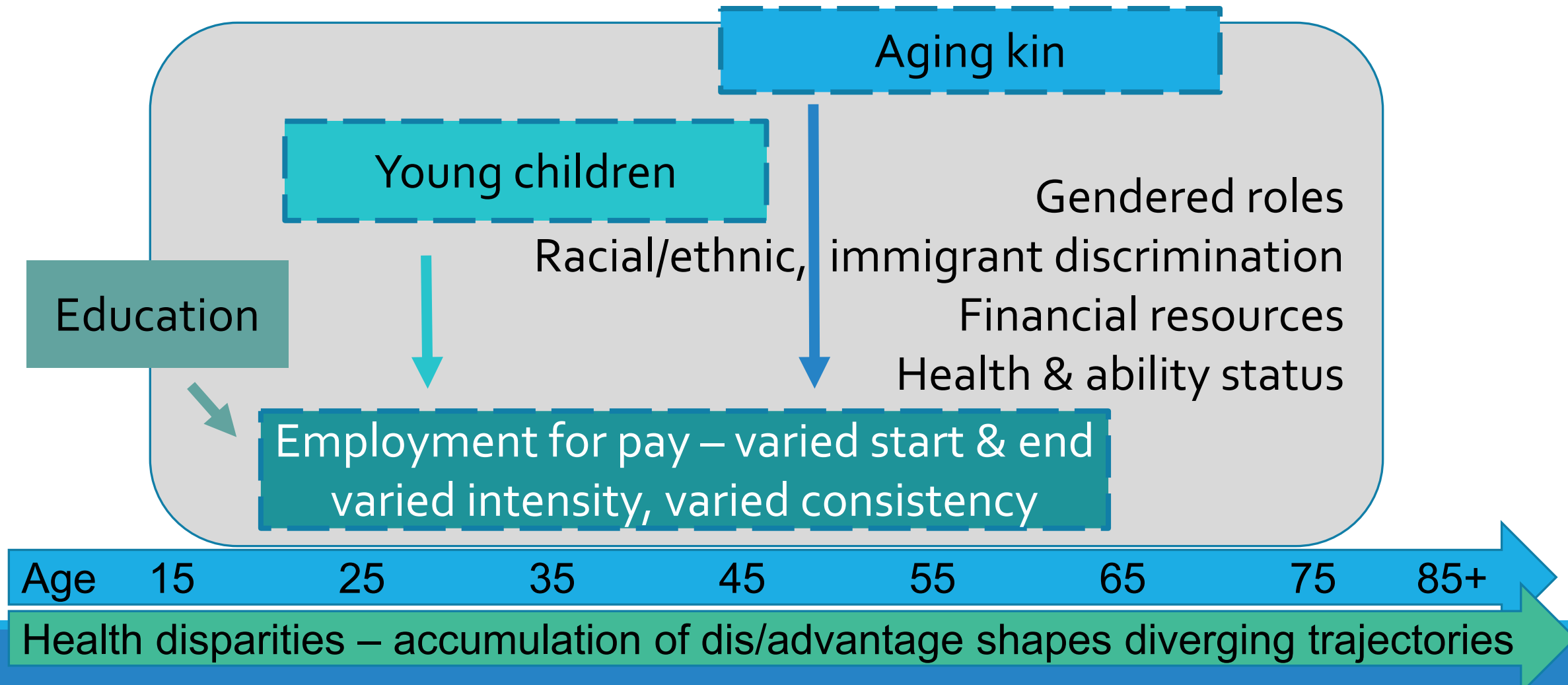- Work brings power, health-enhancing social networks, positive social identity, access to critical material resources (Pavalko & Smith 1999)

Evidence for health **variation among those who work** for pay (e.g., by intensity, occupation, job quality, (non-)standard contract

Work **experiences vary by social distinctions** including: education, race/ethnicity, gender, immigrant status, disability status, other identities & statuses

Work experiences & consequences intersect with unpaid obligations

Work & health unfold over time, modified by competing (unpaid) obligations & social context

Aging kin

Young children

Education

Gendered roles

Racial/ethnic, immigrant discrimination

Financial resources

Health & ability status

Employment for pay – varied start & end
varied intensity, varied consistency

Age   15   25   35   45   55   65   75   85+

Health disparities – accumulation of dis/advantage shapes diverging trajectories

Why study work?
Plausible mechanisms

Plausible mechanisms – link to health, differentially distributed
- **Psychosocial** – from strain to status
- **Material** – wages, benefits available
- **Physical/environmental** – hazards to the body
- **Workplace/employer context** – culture, employment contracts
- **Temporal** factors – shifts, schedules & employment stability

Changes to scheduling instability have impact larger than hourly wage (compare gradients)

Harknett & Schneider study scheduling practices in service sector jobs & links to health
2019 *American Sociological Review*
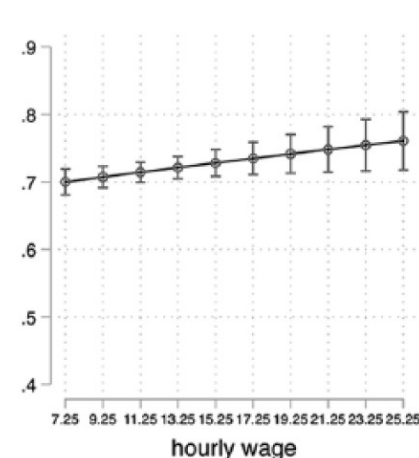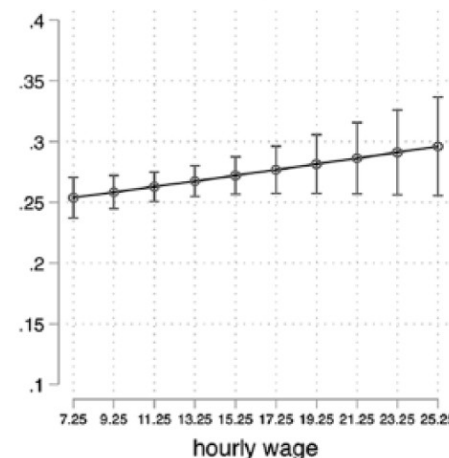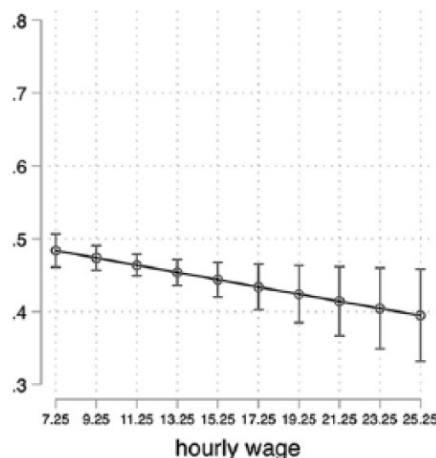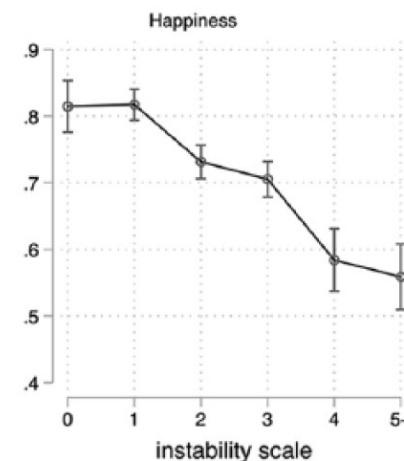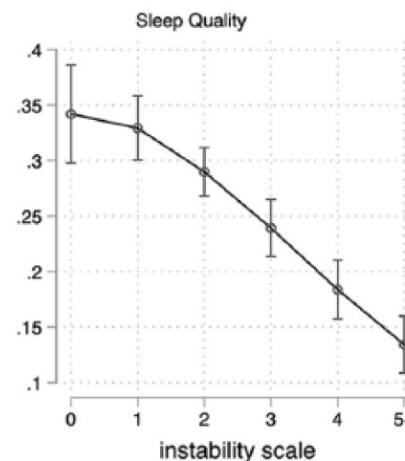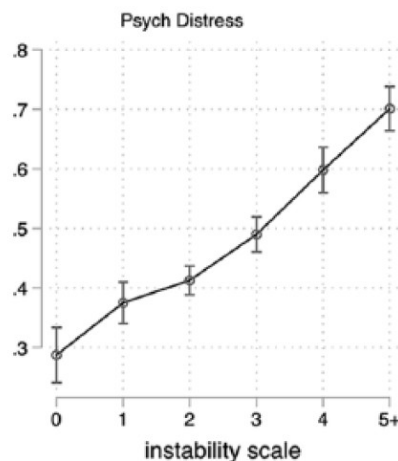
Some key questions remain

1. What are **specific (modifiable?) mechanisms** underlying <u>health disparities</u> that implicate work?

2. **To what extent** do different experiences of work explain <u>health disparities</u>? **Which disparities**? Suggestive recent findings:
- Role of <u>occupational complexity</u> & <u>work hazards</u> in <u>mortality</u> disparity by **race/ethnicity** (Fujishiro et al 2017), **education** (Fujishiro, MacDonald & Howard 2019)
- Role of <u>occupational complexity</u> in <u>cognitive function</u> disparity by **education** (Fujishiro et al 2019)

Choices & challenges

KNOWN CHALLENGES TO FILLING THESE KNOWLEDGE GAPS

What study design? Each has pros/cons

Population-based studies of individuals
  ◦ NHIS, HRS, NLS/Y, BRFSS, other representative cohorts/cross-sections

Other studies of **individuals**
  ◦ In-depth **interviews**, specific **groups/organizations** (Whitehall study)
  ◦ **Firm/employer**-based studies (Alcoa, Moen/Kelly time study)
  ◦ Physical **worksite**-based studies (Exposure monitoring on site)
  ◦ **Community** studies of plant closures (Not just workers; Marienthal)

Occupation-specific studies
  ◦ E.g., aggregate level rates and trends, occupation- specific surveillance

MMWR | Silicosis in Stone Fabrication Workers

Silicosis

- **Incurable** lung disease
- **Occurs after breathing silica dust**

Workers are at risk

18 cases in **4** states

2 deaths

Most worked with engineered stone

How to protect workers

- **Control and monitor** exposures
- **Comply** with standards
- **Conduct** medical screening

SAFETY FIRST

WWW.CDC.GOV

CS 292376-AB

How to measure/operationalize work?

What, exactly, do we measure?

How do we measure it? Self report? Expert rater? Objective monitor? Administrative records? "Natural" experiment?

How many measures of work can we realistically & effectively capture in one data source? Is data linkage a possibility?

How often do we measure it, on dimensions of individual life course and/or calendar time?

(How do we pay for it?)

When & how often we measure determines what we can see

Non-random loss to follow up, long wait for follow up, expensive, may miss part of life course

What year is it?

Longitudinal: multiple exposure points, varying possible ages

Cross sectional: many ages, one exposure point

Miss early retirees, or if unemployed at time of survey, no view of temporal ordering between current health & current work

Employment for pay – varied start & end varied intensity, varied consistency

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Health disparities – accumulation of dis/advantage shapes diverging trajectories

How to capture impact of work in complex, often lengthy paths to health disparities

Classic **conceptual/analytic** issues: confounding; causal directionality; healthy worker effect; challenges of mediation analysis; work indicators may be correlated; etc.

Common relevant **data limitations**: power to conduct group comparisons and mediation analysis; cross-sectional vs longitudinal; quality of measures of work vs measures of health; changes over historical time in occupation categories & occupation sizes, characteristics, demographic makeup; etc.

Additional considerations when mapping priorities

LESS EXPLORED ISSUES & CONTEXTUAL MODERATORS

Issues at the individual level

Data "silences" that could influence size of disparities observed

- How to represent those with **weaker attachment** to formal labor force? Due to unpaid obligations, institutionalization, incarceration, etc.

- Should we/how to incorporate **unpaid or informal** work?

How to **reduce data complexity** across work indicators & career spans without losing sight of important variation?

Issues at the aggregate level

Thinking **beyond the individual** worker
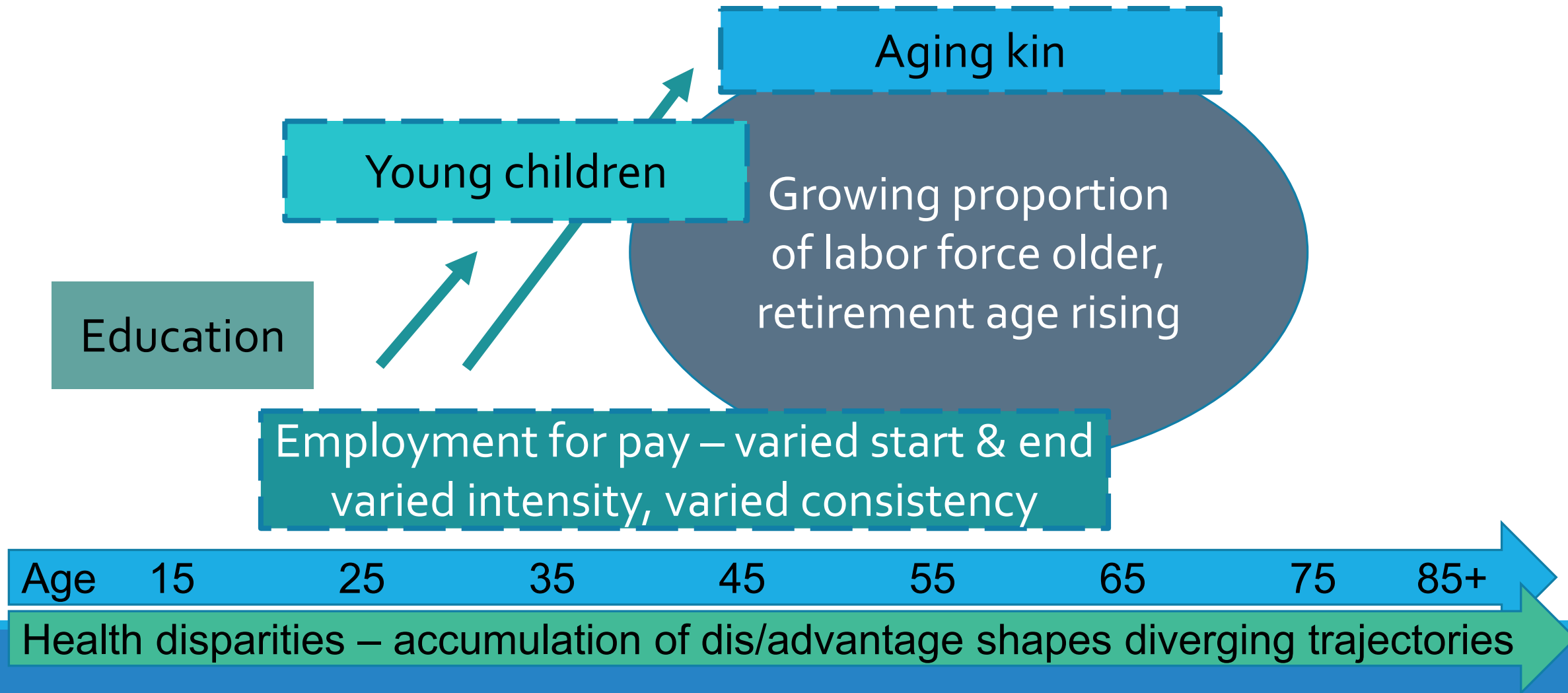- Families/generations
- Communities

Correlates of **population aging**
- Older workers a growing fraction of labor force overall
- Rising retirement age brings opportunities but also costs, unequally distributed

Aggregate considerations: implications beyond individual workers & of an aging workforce

Aging kin

Young children

Growing proportion of labor force older, retirement age rising

Education

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# Macroeconomic & other contextual conditions may modify associations

Globalization of labor, changing work opportunity structures

Welfare state arrangements & **policy** choices - which work mechanisms & disparities do policies influence?

Economic **recessions** – how do impacts on work matter?

Pandemics & natural **disasters** – remote work, essential workers, workplace safety & beyond

Recessions – change in work, health & disparities?

Sarah Burgard & Lucie Kalousova. 2015. *Annual Review of Sociology*
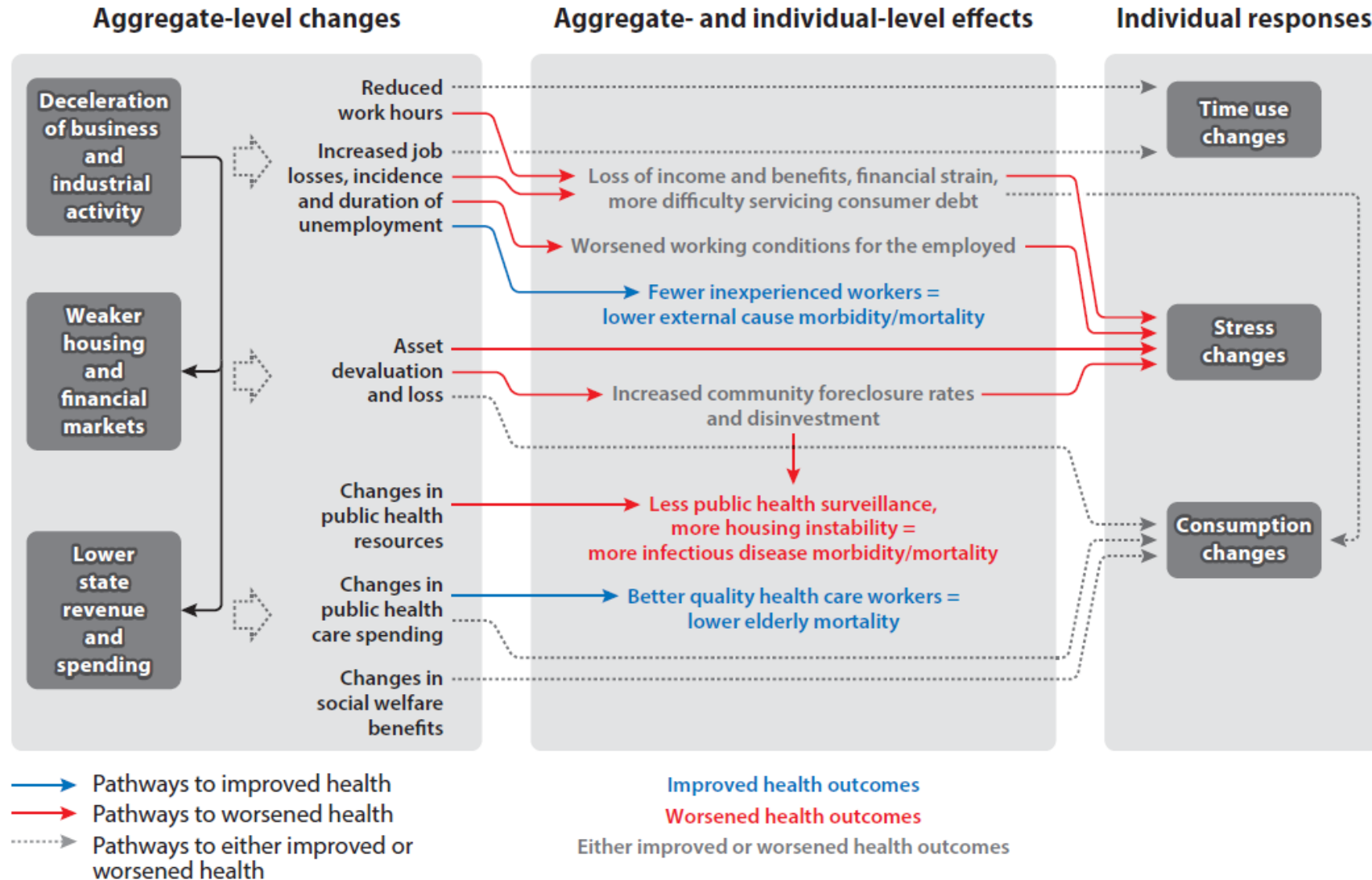
Front line workers – high job growth but low pay & new hazards (COVID-19) for less advantaged workers
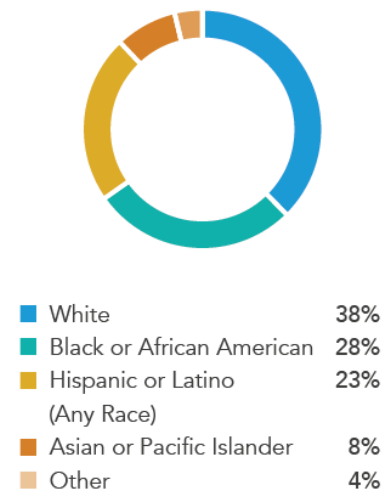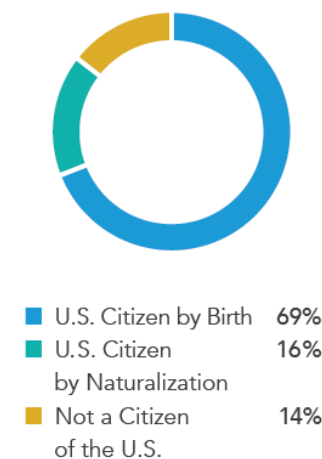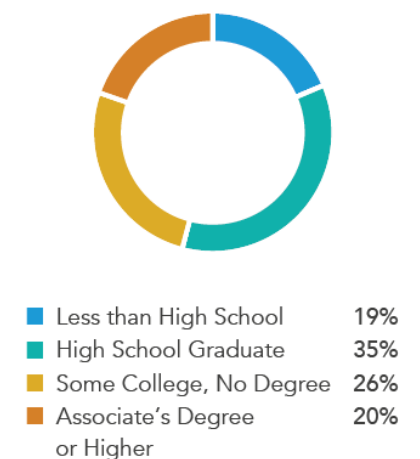
Balance of focus - bad jobs | good work

Innovating in the longstanding focus on **health harming aspects** & unequal impacts on health of disadvantaged groups

Learning from studying **"good" jobs** and **"successful" careers** - good/ **"high road" employment** contracts - "good" employers - "worker-protective" societies

Science without silos

What would more **holistic**, **collaborative** assessment **across work-related mechanisms & health outcomes** reveal about role of work in health disparities?

How should we put occupational health & population health approaches – that have evolved somewhat separately (Ahonen et al 2018) - into **productive conversation**?

Thank you

Sarah Burgard

burgards@umich.edu