

## The impact of COVID-19 on morbidity and mortality patterns across the life cycle and in particular groups

### A Synopsis

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March 2023



Presented to ArPHA's 3d international conference (2023 -Cairo – Egypt) on:

تحول القطاع الصحي بعد كوفيد-19

تحديات وفرص الصحة العامة



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## Center's Goals

- نشر الوعي الصحي وإفشاء الصحة العامة في المجتمع المحلي
- إبراز الحقائق المتعلقة بالصحة ودحض الخرافات
- الحظ على الاهتمام بصحة الفرد والأسرة والمجتمع المحلي بكافة نواحيها
- التعريف بأهمية الصحة من منظور إسلامي
- تعزيز الروابط ما بين المجتمع المحلي والمؤسسة الطبية وتعزيز فرص الحصول على الرعاية الصحية
- برامج متعددة للتدخل صحي، منها:
  - المساعدة على الإقلاع عن تعاطي التبغ والمواد الأخرى
  - طب القلب الوقائي
  - المساعدة على التحكم في مرض السكري
  - طب السرطان الوقائي
  - استطلاعات وإحصائيات
  - فعاليات النشاط البدني والرياضي
  - مهرجانات صحية
  - استعدادات الطوارئ
  - الصحة النفسية



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Author's note: This is an ongoing observational research project addressing three interrelated issues in the subsequent COVID era.

# Impact of COVID-19

- Applying epidemiological concepts
- To study GH & disease patterns
- Across the life cycle
- In different populations
  - Particular groups (underrepresented in US PH studies)
    - Arab / Muslim, immigrant, indigenous populations
- Impact of COVID-19 on these patterns

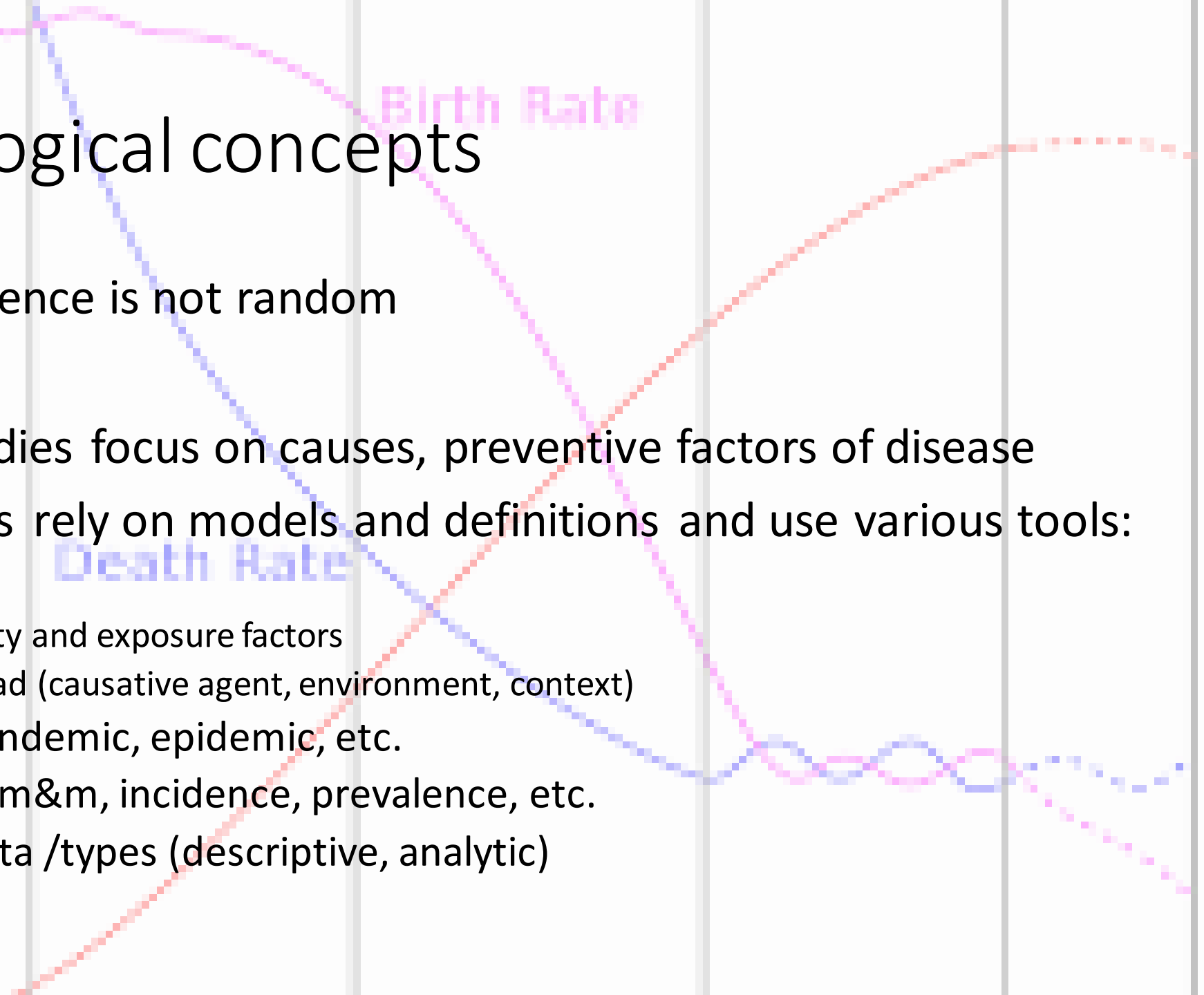
Births/ Deaths per 1000

# Epidemiological concepts

- Disease occurrence is not random
- Factors / DOH
- Population studies focus on causes, preventive factors of disease
- Epidemiologists rely on models and definitions and use various tools:
  - Models:
    - Susceptibility and exposure factors
    - Epidem. Triad (causative agent, environment, context)
  - Definitions: endemic, epidemic, etc.
  - Tools (rates): m&m, incidence, prevalence, etc.
  - Sources of data /types (descriptive, analytic)

Birth Rate

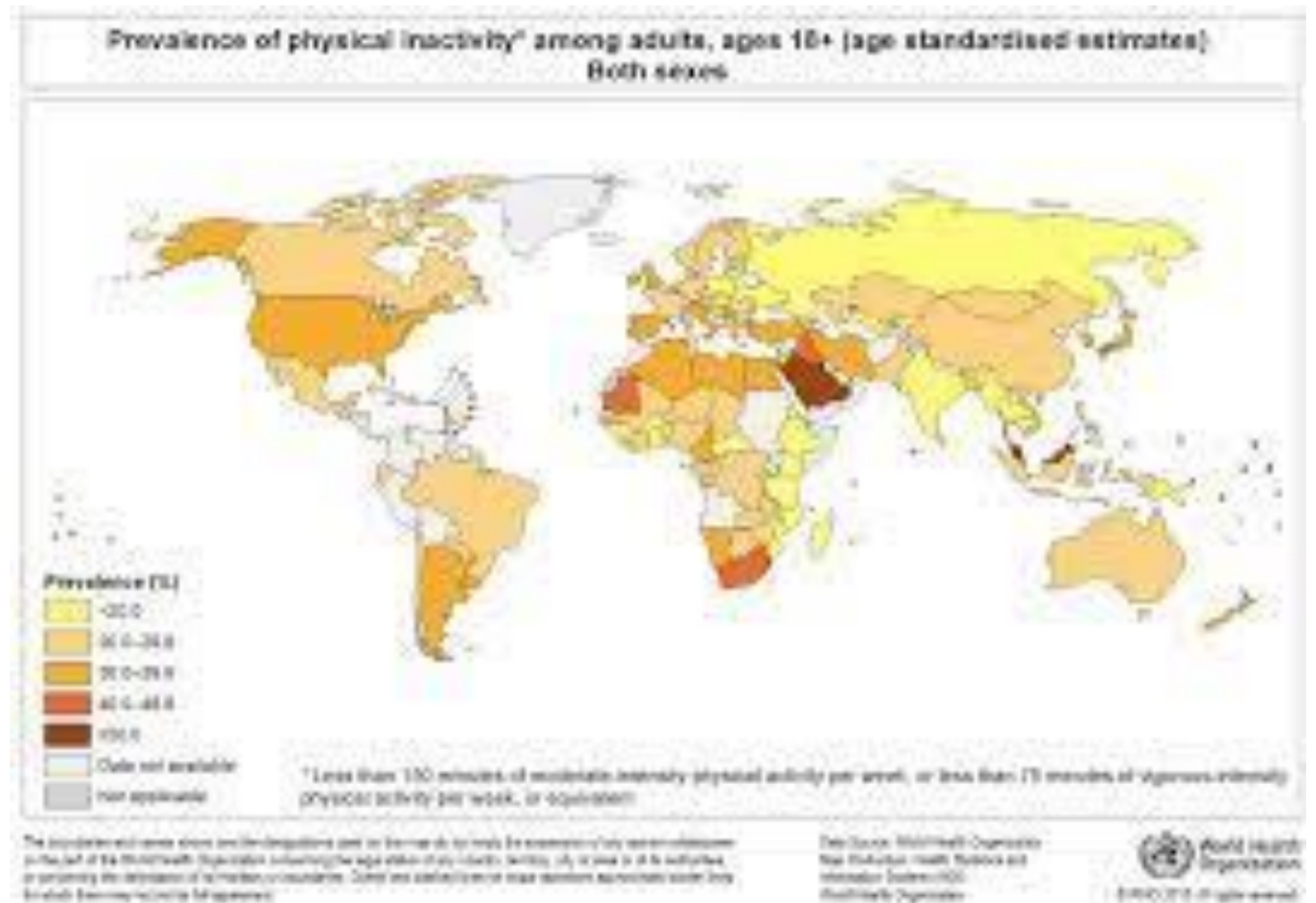
Death Rate



# GH & Disease Patterns

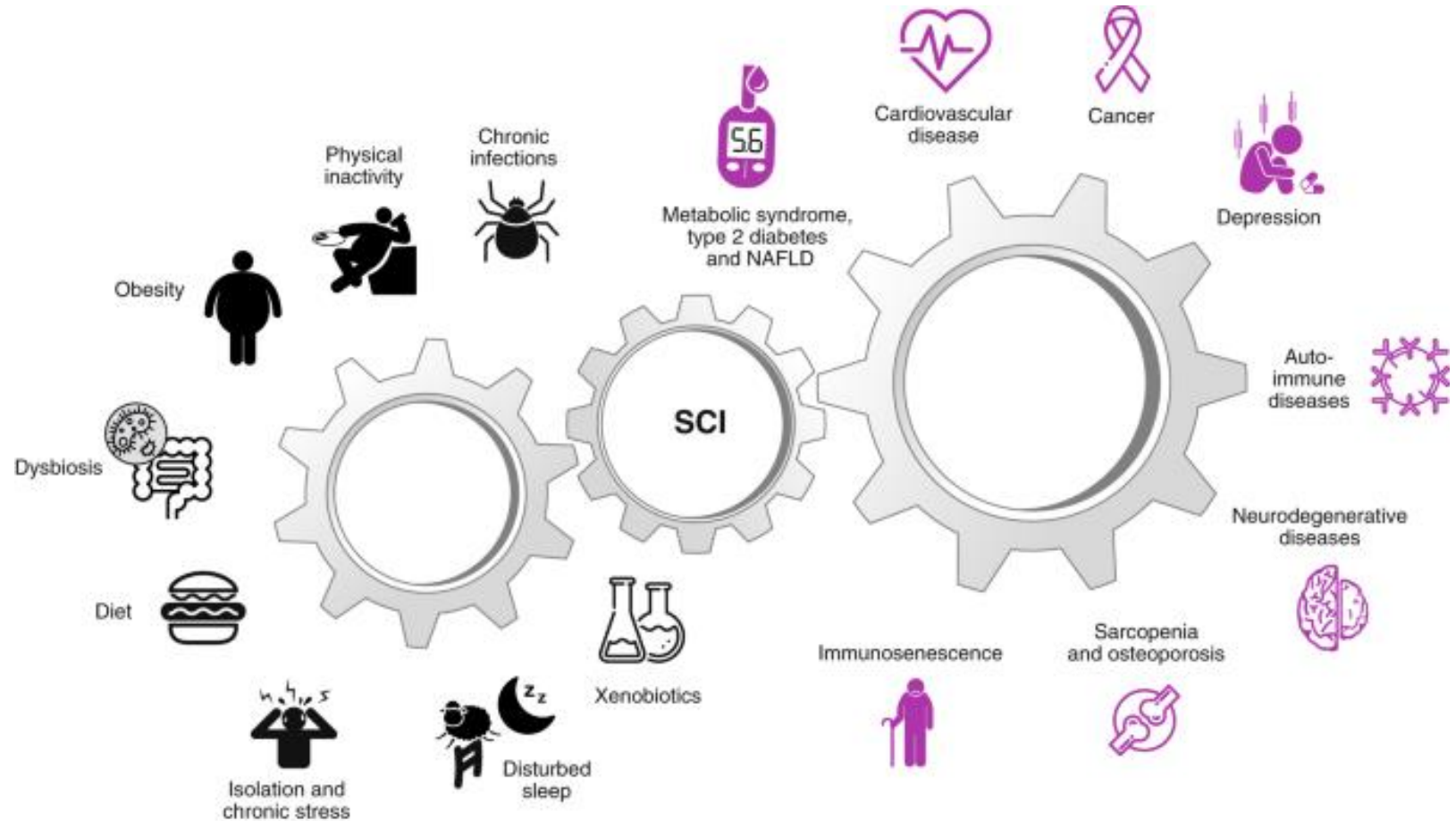
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- Infectious diseases / epidemics
- NCD's: esp. CVD / lifestyle
- Environmental H
- Emerging diseases / re-emerging dis
- Natural disasters / conflicts
- Genetics



# Life cycle

- Children:
  - Asymptomatic
  - RSV
- Adolescents
- Adults
- Older adults





# Particular Populations

Underrepresented

Context: NY region, USA

- Arab / Muslim community
- Immigrants
- Indigenous

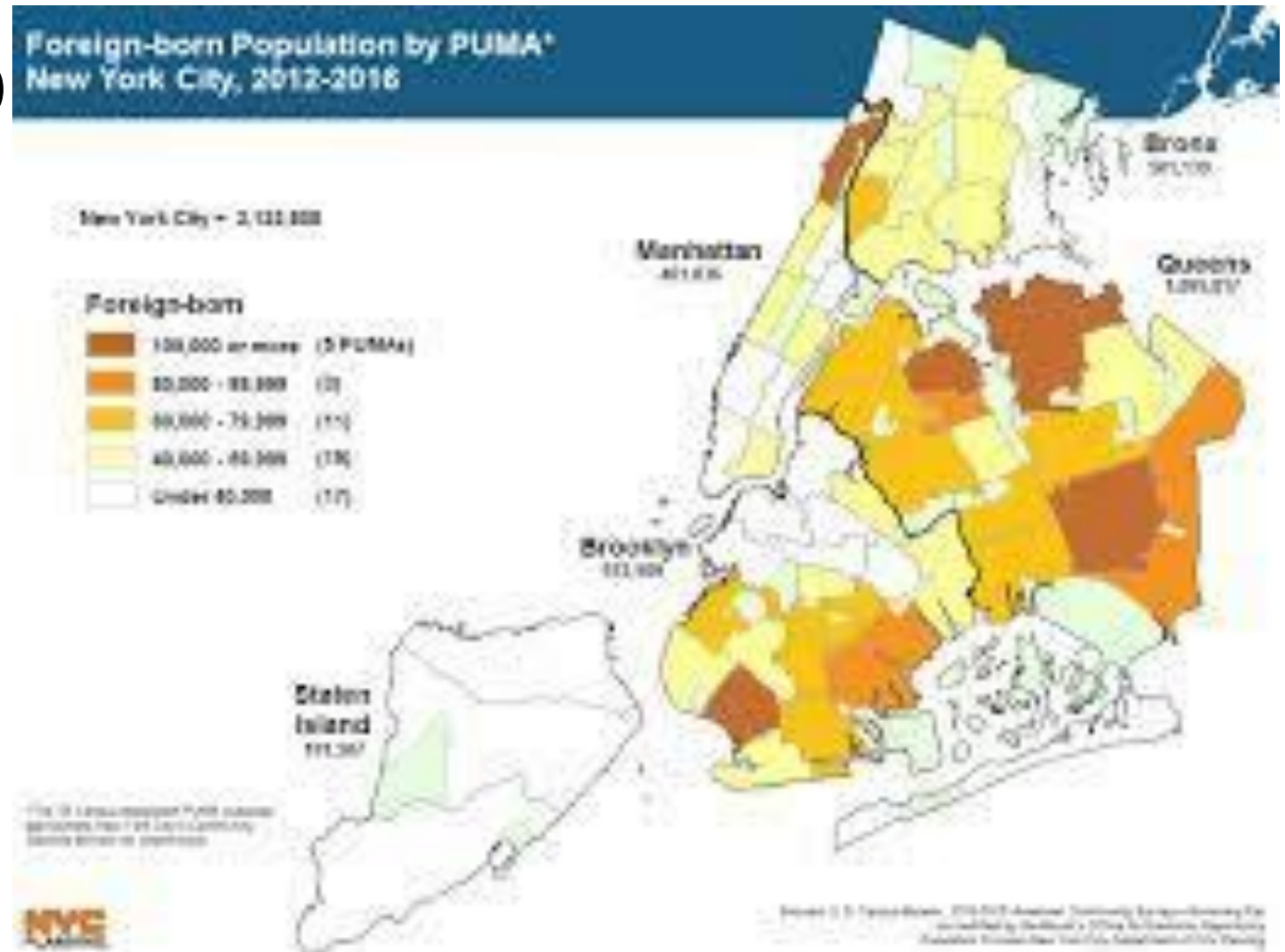
# Arab / Muslim Community

- Issues:
  - Health literacy
  - Inadequate access
  - Lifestyle: tobacco use, improper nutrition
  - Chronic problems: Diabetes, Hyperlipidemia / Dyslipidemia, Hypertension
  - Deficient data / statistics
- COVID
  - Long COVID syndrome
  - Deficient vaccination



# Immigrant po

- Mexicans
- Caribbean
- Africans
- Middle Easterners
- Europeans / Russians
- Others



## Indigenous

- Shortened life expectancy
- Exacerbated chronic issues
- Disparities



# Impact of COVID - Summarized

- Chronic immune deficiency (physiological and population)
- Post-covid / Long COVID syndrome
- Special issues in children, older adults
- People with existing NCD's (esp. heart disease)
- SARS-COV2 atypical target organs (myocardium, urinary, neurological): ongoing research
- Health systems / protocols
- Education / schools: preparedness / innovations

Covid-19 impacts all aspects of society

Education



**1.6bn**  
students out  
of school

Climate



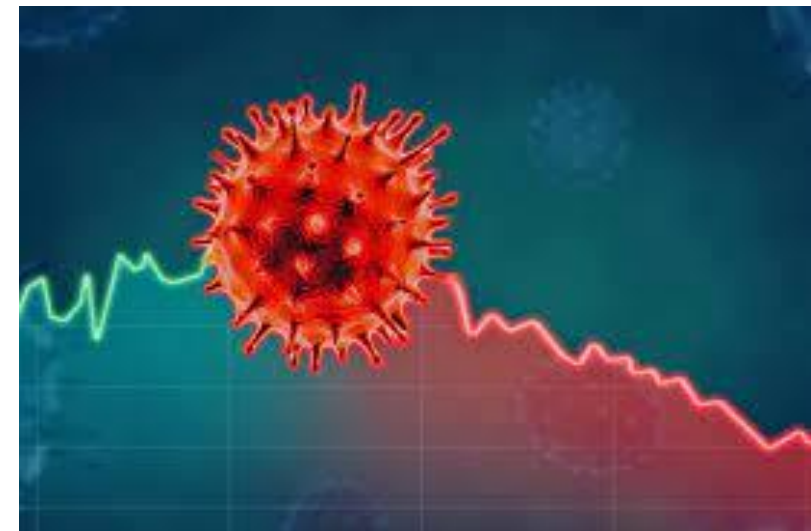
**-30%**  
investment in clean  
energy transition

Poverty



**+251m**  
people pushed into  
poverty by 2030

Source: AIT Accelerator Plan and Investment Opportunity presentation.  
Data from the World Bank, World Intelligence and the United Nations.  
<https://www.aita.int/publications/aita/accelerator-plan-and-investment-opportunity-presentation>  
SDG Integration <https://sdgintegration.unep.org/interlinking-development-progressduring-covid-19>



## Lessons / Recommendations

- Importance of preparedness
- Addressing chronic problems
- Need for adequate data, monitoring
- Telehealth
- Community involvement
  - Example of Success: NYC community preparedness / emergency initiative

