# Comprehensive Real-World Data

### Health

# Checkup/immunization data on one's entire life

• Large-scale group resident checkups (lwaki project checkup/elderly health checkups, etc.)

- Prenatal checkups, infant and toddler checkups, school checkups, regular workplace checkups, specific checkups, checkups for elderly in the latter stage of life, self-monitoring style QOL checkups
   Immunizations (Influenza,
  - pneumococcus, COVID-19, rubella, shingles, etc.)

# Living

# Real time life logs over course of life

- Vital data (IoT/PHR)
- Medication, sleep, oral care, stress
- Exercise (movement), diet, employment, communication, outings, etc.)

# Welfare

#### From elderly care to regional comprehensive care Coexisting regional society

- Elderly care (elderly care receipts, authorization of primary nursing care, level of independent daily life, LIFE)
- Support for the needy (authorization, medical/elderly care benefits)
   Child welfare (advocacy consultation, children
- Child weitare (advocacy consultation, children in need, etc.)
- Welfare for people with disabilities (authorization, service benefits, assessment)

# Environment

 Atmosphere, soil, water quality, climate, snow removal, waste

> Hirosaki University Multi-item <3,000> Big data on health

> > <1,000 people × 18 years>

Molecular biological data Physiological/ biochemistry data

ndividual lifestyle activity data Presence Identity

# Social Environment Data <Comprehensive Real World Data (RWD)>

### Nationwide interdisciplinary data

Iwaki Kenshin (Aomori) Yambaru Kenshin (Okinawa), Wakayama Kenshin (Wakayama), Kyotango Kenshin (Kyoto), The Hisayama Study (Fukuoka), QOL checkup (Aomori/Japan/Vietnam), etc.

### Medical

#### Extensive receipts Detailed electronic records

- Receipts (medical/dental/pharmaceutical; national health insurance/elderly in latter stage of life/Japan Health Insurance Association)
- Electronic records (from SS-MIX to FHIR; Hirosaki General Medical Center (Previously the National Hirosaki Hospital), Hirosaki University Hospital, etc.
   Medical images (DICOM, MFER, etc.)

### Community/ Industry

Relationship between community development, industry and health is apparent

- Residence, water and sewer services, energy, transportation/trade, disaster prevention and reconstruction
- Agriculture, forestry, and fishery industries, manufacturing, business, financial industry, services industry

## Childcare/ Education

#### Evidence based healthy/sound child rearing

- Health lessons, child rearing exercises
- Childcare (accreditation of childcare facilities, childcare for sick children, etc.)
- Special needs education (support plan, support outcomes, afterschool care benefits, assessment)
- School non-attendance, etc. (adapted instruction records, free school records, etc.)