Building a data visualization management model for big health data at community health service stations by POWER BI

- **Mei-Yu LEE R.N.**
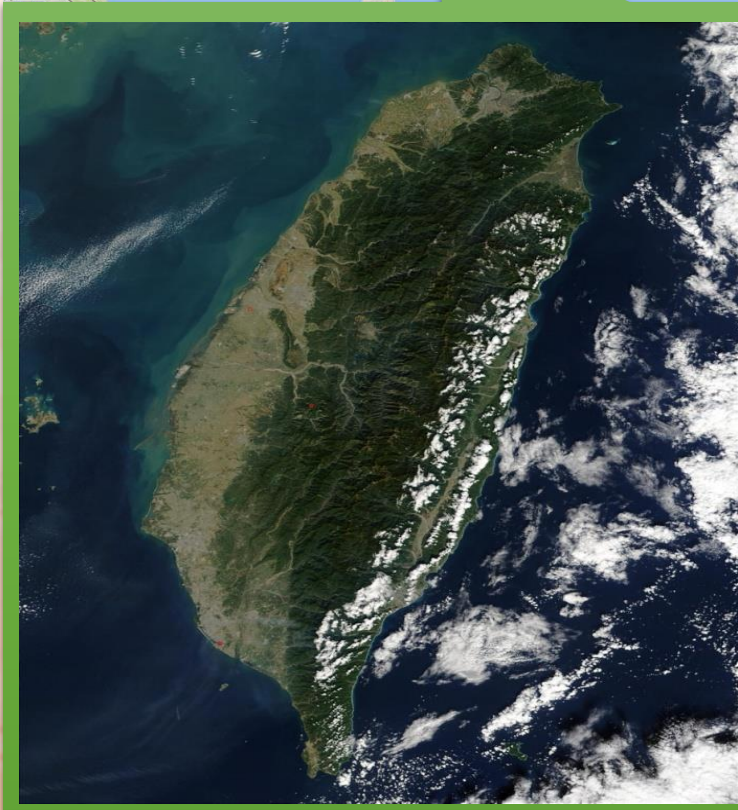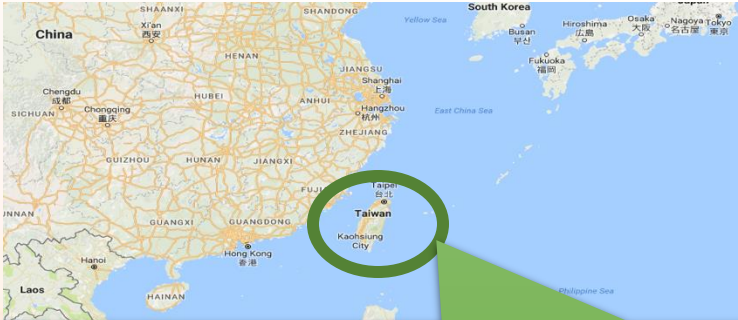- **MacKay Memorial Hospital**
- **2024.11. 8**

TAIWAN

- **Capital: Taipei 25°02'N 121°38'E**

- **Population: 2022 estimate 23.2 million**

- **GDP (PPP): 2021 estimate Total $1.40 trillion, Per capita $59,398**

- **GDP (nominal): 2021 estimate Total US$ 775 billion, Per capita $33,011**

- **Life expectancy: 77 years (men) 84 years (women)**

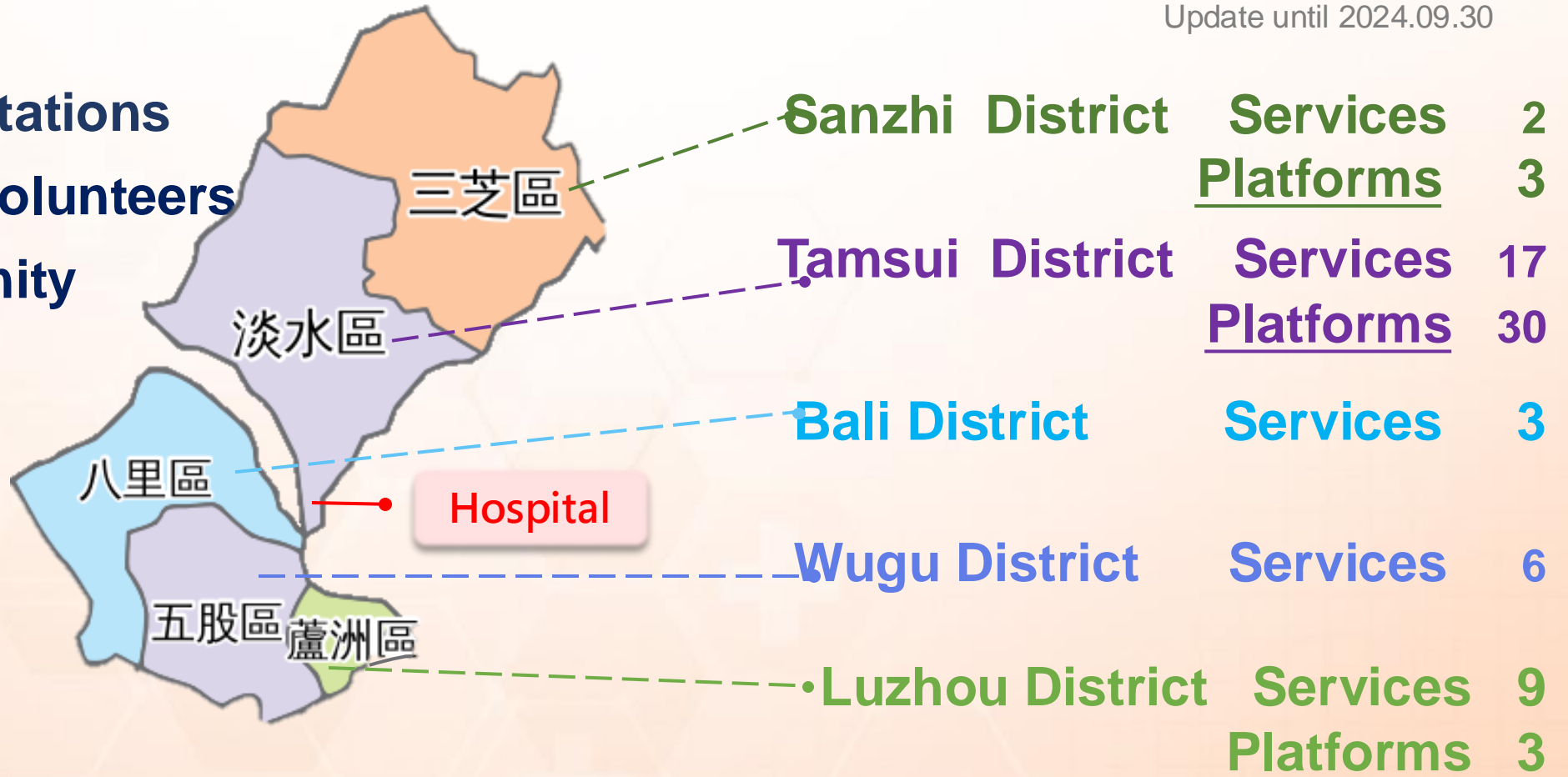- **Area Total 36,193 km2 (13,974 sq mi) (136th)**

MMH In Brief

- **Taipei and Danshui together qualify as a Medical Center with the longest history in Taiwan**

- **A health network through northern, western and eastern of Taiwan**

- **Intradepartmental cooperation to provide integrated, comprehensive care.**

- **Dedicated to conducting innovative research for practical clinical application**
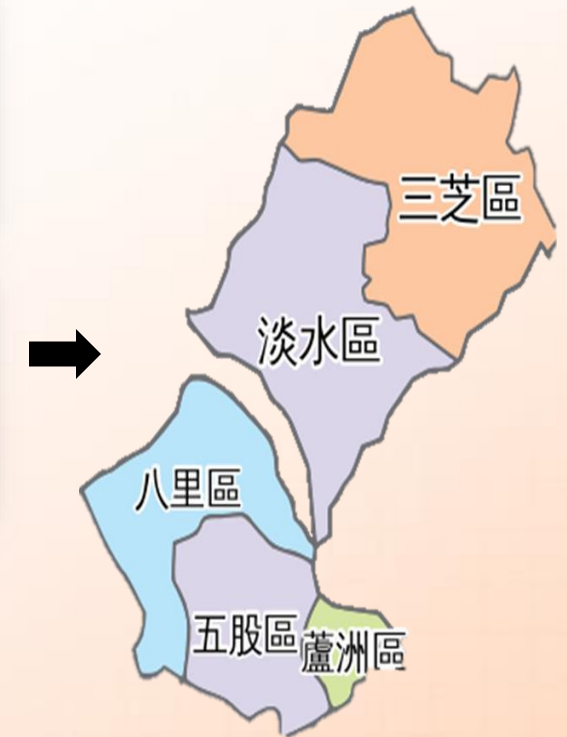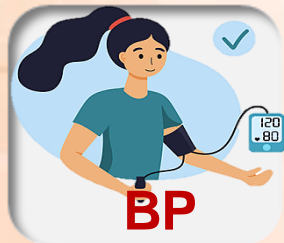
- **Upholds a mission to train future medical professionals.**

淡水院區
Tamshui Branch

病床數1064
1064 inpatient beds

馬偕醫學院
Mackay Medical College

馬偕護專
Mackay College of Nursingand Management

台北總院
Taipei Main Hospital

病床數1129
1129 inpatient beds

新竹分院
Hsiuchu Branch

病床數550
550 inpatient beds

台東分院
Taitung Branch

病床數400
400 inpatient beds

Background/Goals(1) - Distribution of Health Stations

■ **5 Districts**

■ **73 Health Stations**

■ **398 Local Volunteers**
   in Community

Update until 2024.09.30

Sanzhi District Services 2
          Platforms 3

Tamsui District Services 17
          Platforms 30

Bali District Services 3

Hospital

Wugu District Services 6

Luzhou District Services 9
          Platforms 3

三芝區

淡水區

八里區

五股區 蘆洲區

4

Background/Goals(2)- Develop representative indicators and daily management indicators

BMI

Waist

BP

■ **Physiological measurement** (including BMI, abdominal waist and blood pressure).

5

Method(1)

Followed by the steps below to **develop community health promotion indicators:**

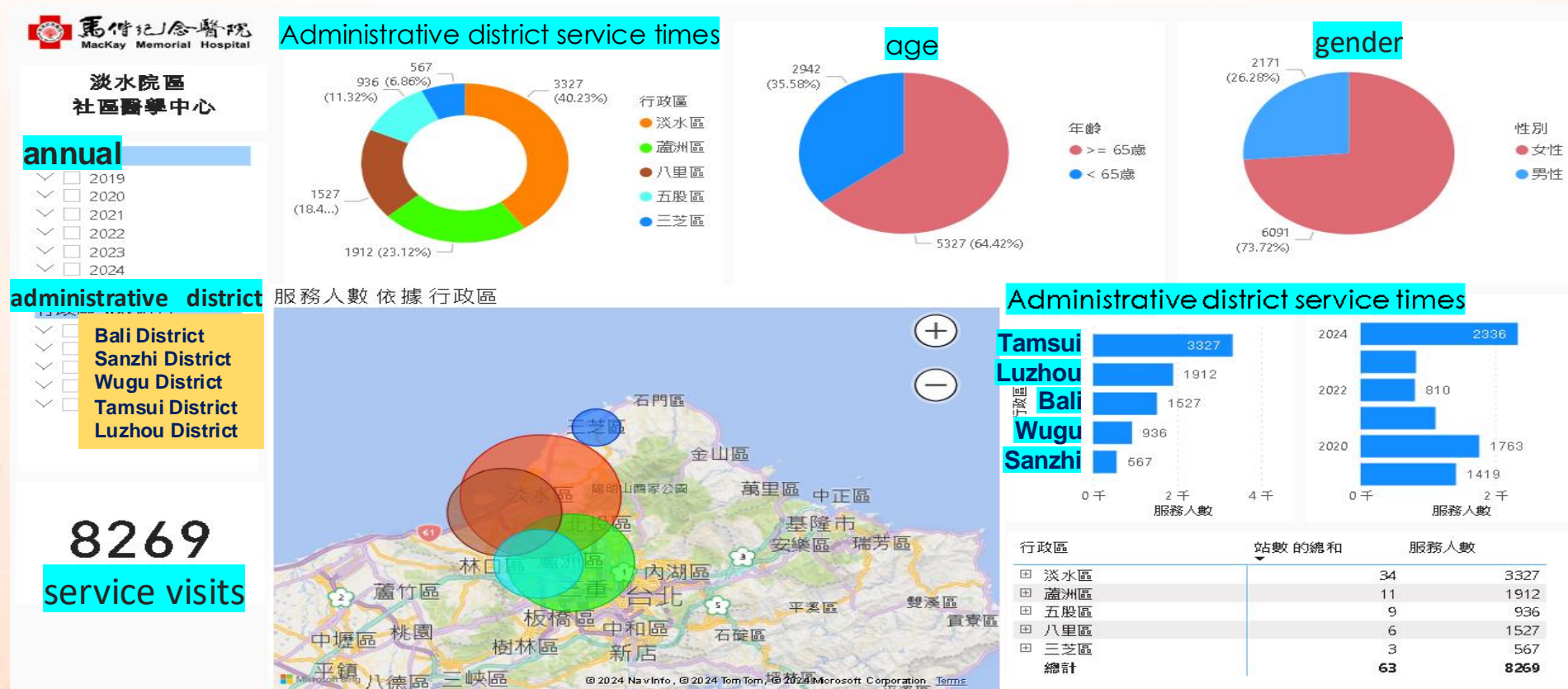1.To visualize the results of service volume, gender, age, BMI, waistline and blood pressure by **Power BI.**

Method(2)

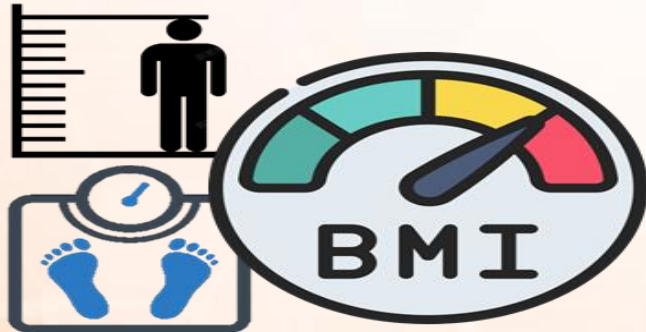2.Develop daily management indicators: Recording the **service volumes** in the community.

Method (3)

3.Establish health promotion indicators for community residents:

a. Outcome indicators:

The average improvement rates of people's BMI, blood pressure, and waistline increased by both 30%, and 40%.
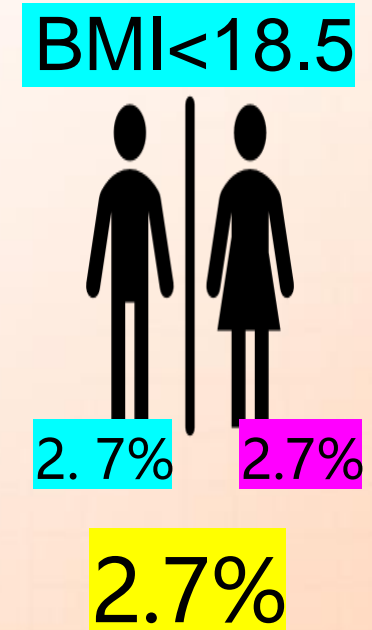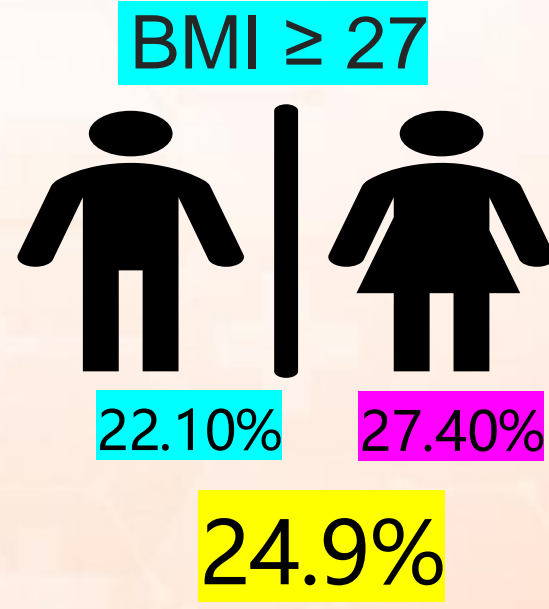
BMI

30%

Blood Pressure

30%

Waist

40%

Method (4) :

b. Indicators for peer comparison:

I. The proportion of people over 65 years old with a BMI ≥ 27 is less than or equal to 24.9%.

II. The proportion of people over 65 years old with a BMI < 18.5 is less than or equal to 2.7%

衛生福利部國民健康署
Health Promotion Administration, Ministry of Health and Welfare

ISSN:2313-2728

中華民國110年
健康促進統計年報
STATISTICS OF HEALTH PROMOTION 2021

Statistics of Health Promotion 2021

衛生福利部國民健康署　編印

中 華 民 國 １ １ ２ 年 出 版

BMI ≥ 27

22.10%   27.40%
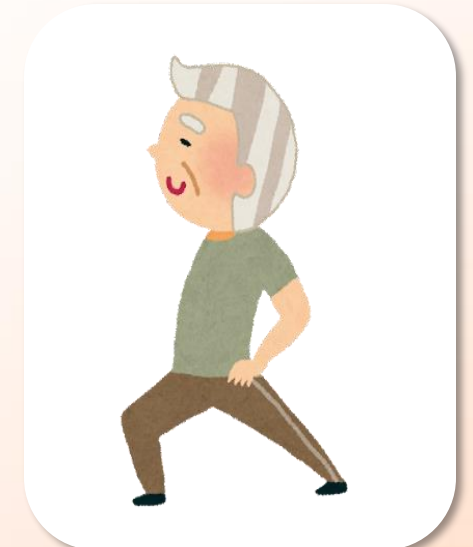
24.9%

BMI<18.5

2. 7%   2.7%

2.7%

Result(1)

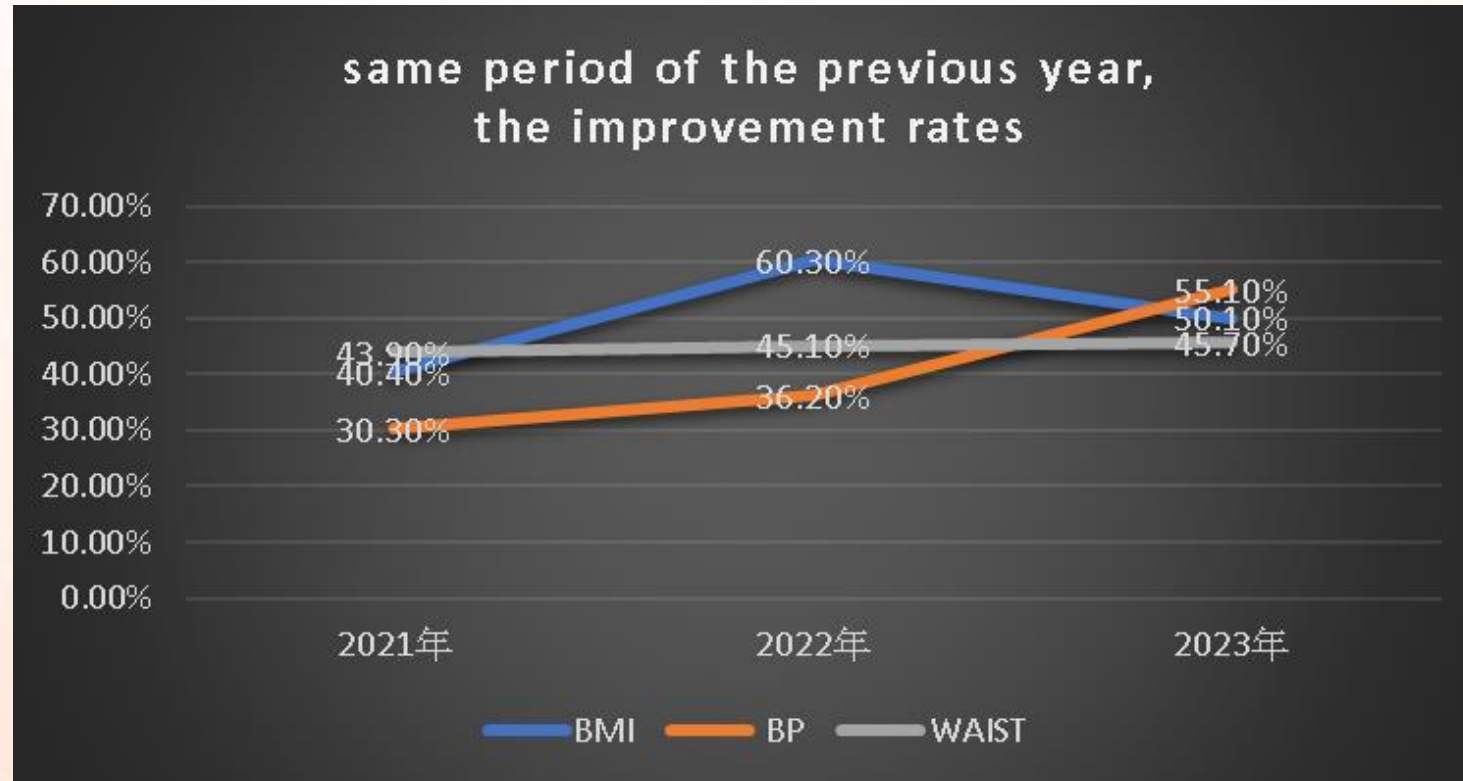**Nursing counseling and health check**

**Health and Nutrition lectures**

Physical fitness courses

Result(2) a.Outcome indicators:

Compared with the same period of the previous year, BMI, blood pressure, and waistline Each of the **improvement rates** are 60.3%, 36.2%, and 45.1% in 2022, and 50.1%, 55.1%, and 45.7% in 2023.
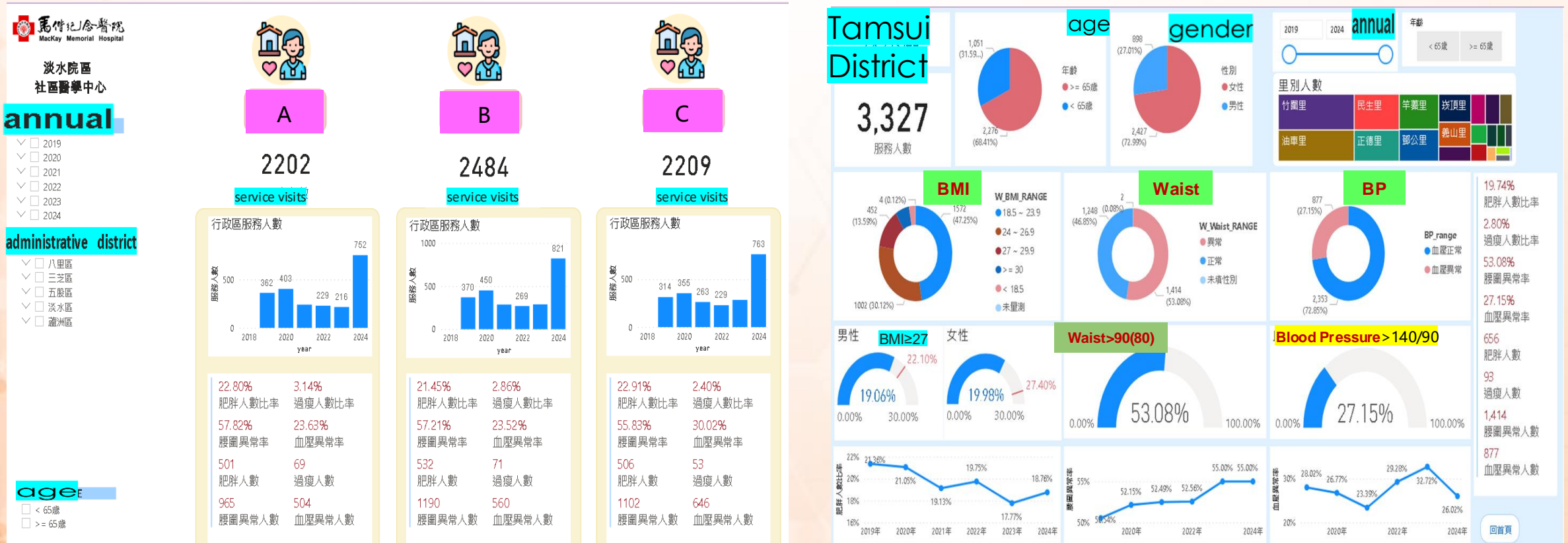
Result(3) b. Peer comparison indicators:

I. The proportion of people over 65 years old with BMI ≥ 27, **24.25%** in 2021, **22.92%** in 2022, **21.32%** in 2023.

II. The proportion of people over 65 years old with a BMI < 18.5, **2.19%** in 2021, **3.15%** in 2022, and **3.14%** in 2023.
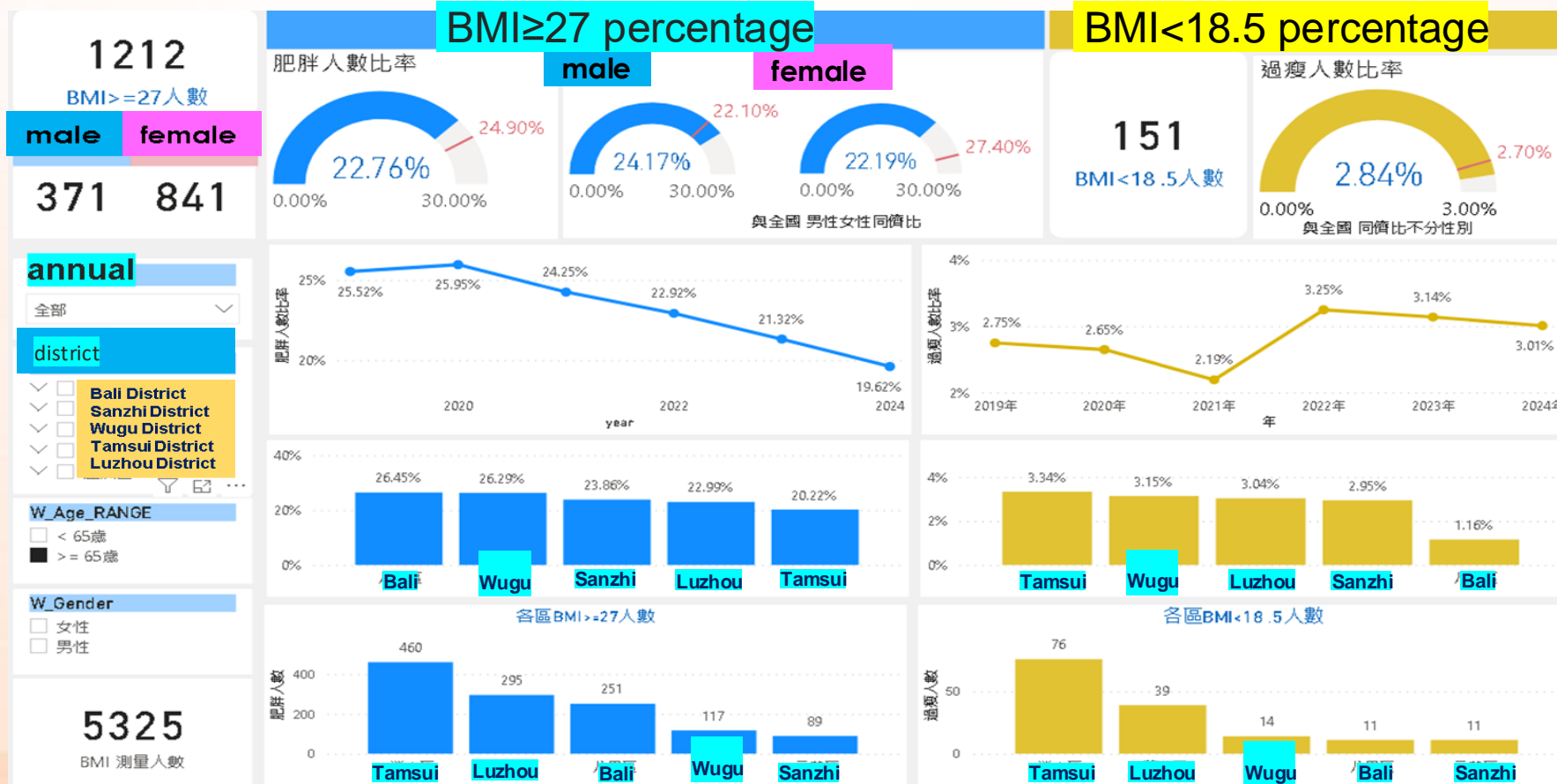
Conclusion

Daily management indicators can be used as a reference of service volume for allocating nursing staff ; Health promotion effectiveness indicators are used as the outcome of team service.

Thank you for your attention