



Management of COVID-19 Pandemic in Scotland Based on the Health Learning System Framework

Wenyan Kong

1. Background

Since COVID-19 Pandemic outbreak, unprecedented challenges have begun to be faced at the public health level. Learning health system is internally driven to achieve continuous learning and improvement by taking existing health data, analyzing it, developing a response plan and receiving ongoing feedback. 1 This piece of poster creates the LHS framework for Scotland's response to the outbreak in the context of the initial stages of COVID-19 Pandemic occurrence.

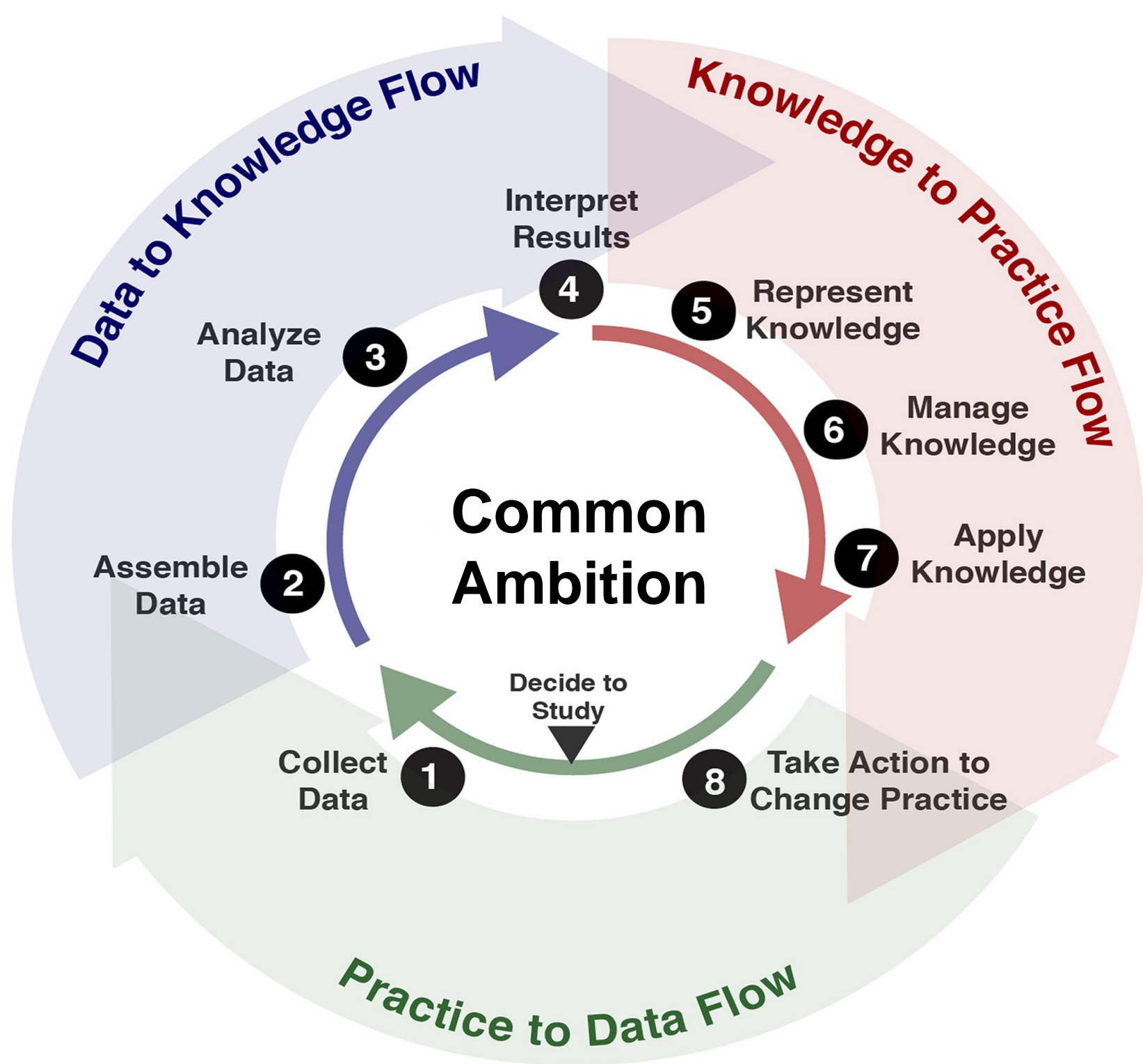


Figure 1: Learning Health System Flow
Source: <https://doi.org/10.1002/lrh2.10054>

4. Knowledge to Practice

- Scottish Government, formulation of policies, interpretation of policies
- Health Scotland, assigning technical guidance, linking doctors and patients' psychological burden
- GP, communicate policy, implement policy
- Patients, Self-management

6. Conclusion

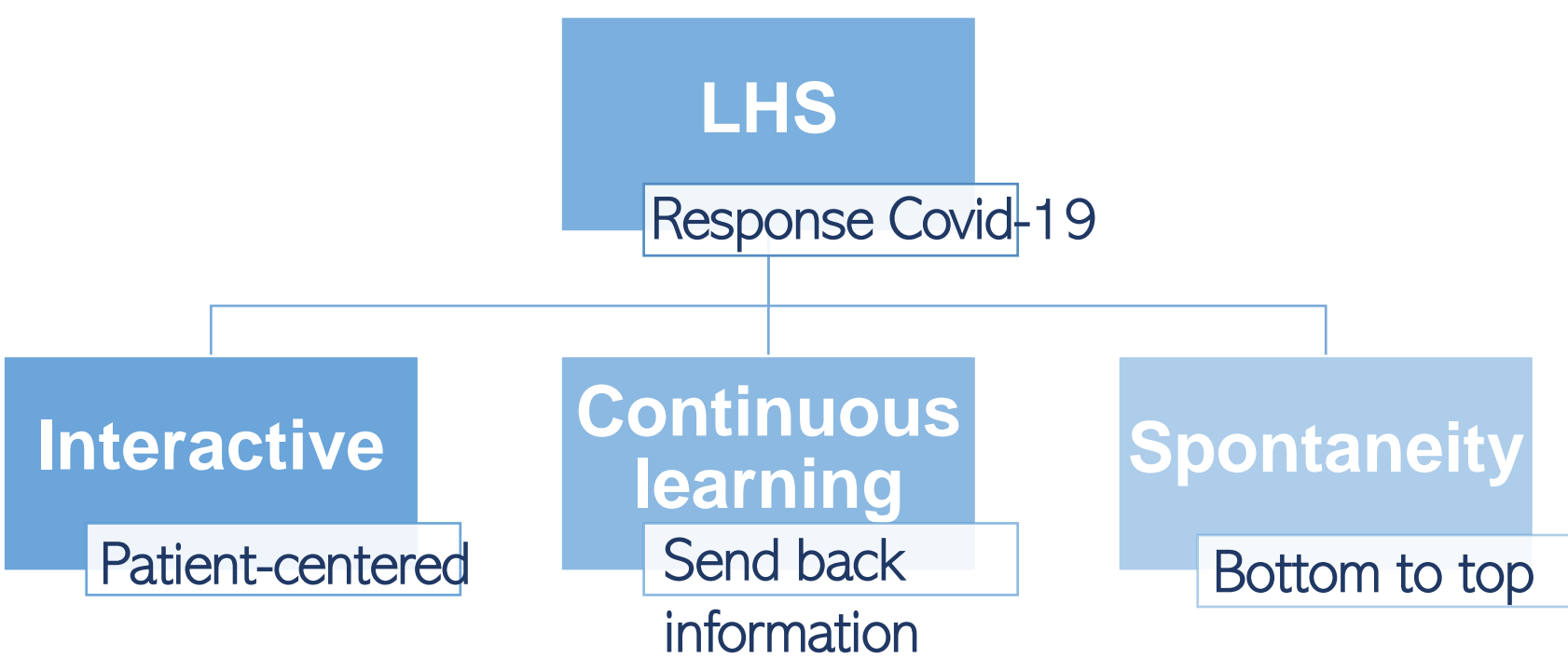


Figure 4: LHS summary based on COVID-19

2. Data Collection

Each patient in Scotland has a unique CHI code, which patients can enter from the official NHS website to make changes to their private data if they wish (full disclosure of data versus anonymous disclosure of data).

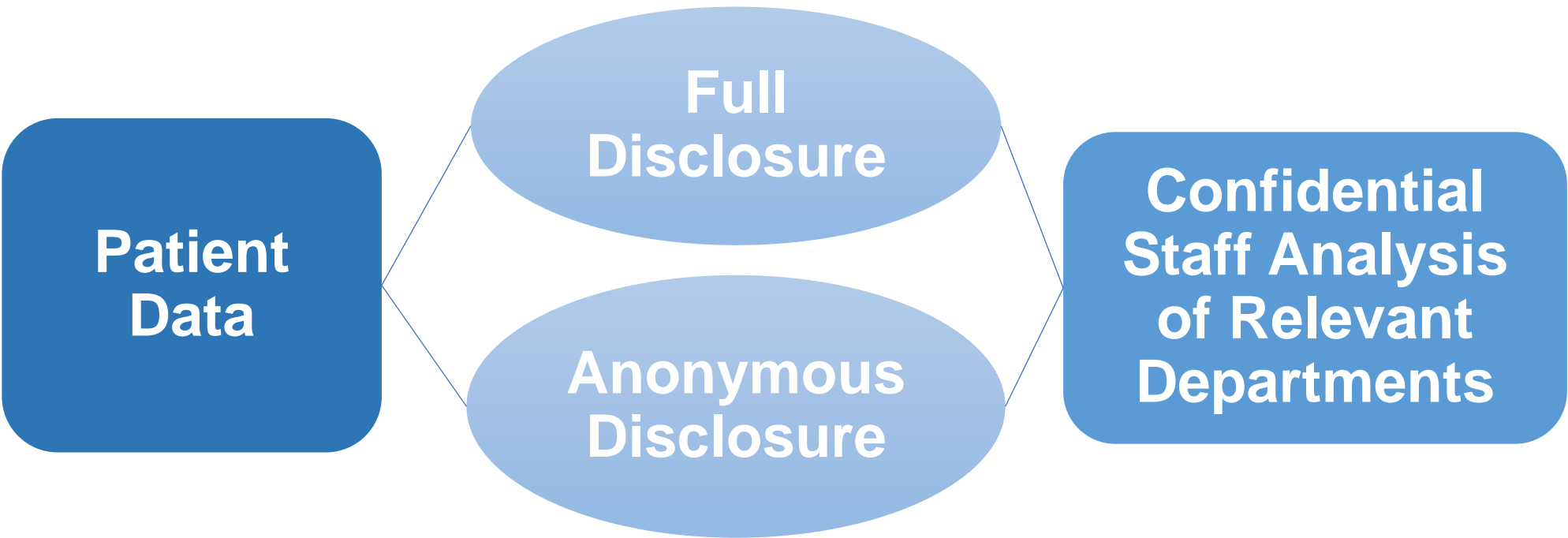


Figure 2: Data processing steps

3. Data to Knowledge

- Analyzing data
- Predicting outbreak peaks, susceptible populations
- Consult with departments
- Deploying response measures
- Communicate in online meetings

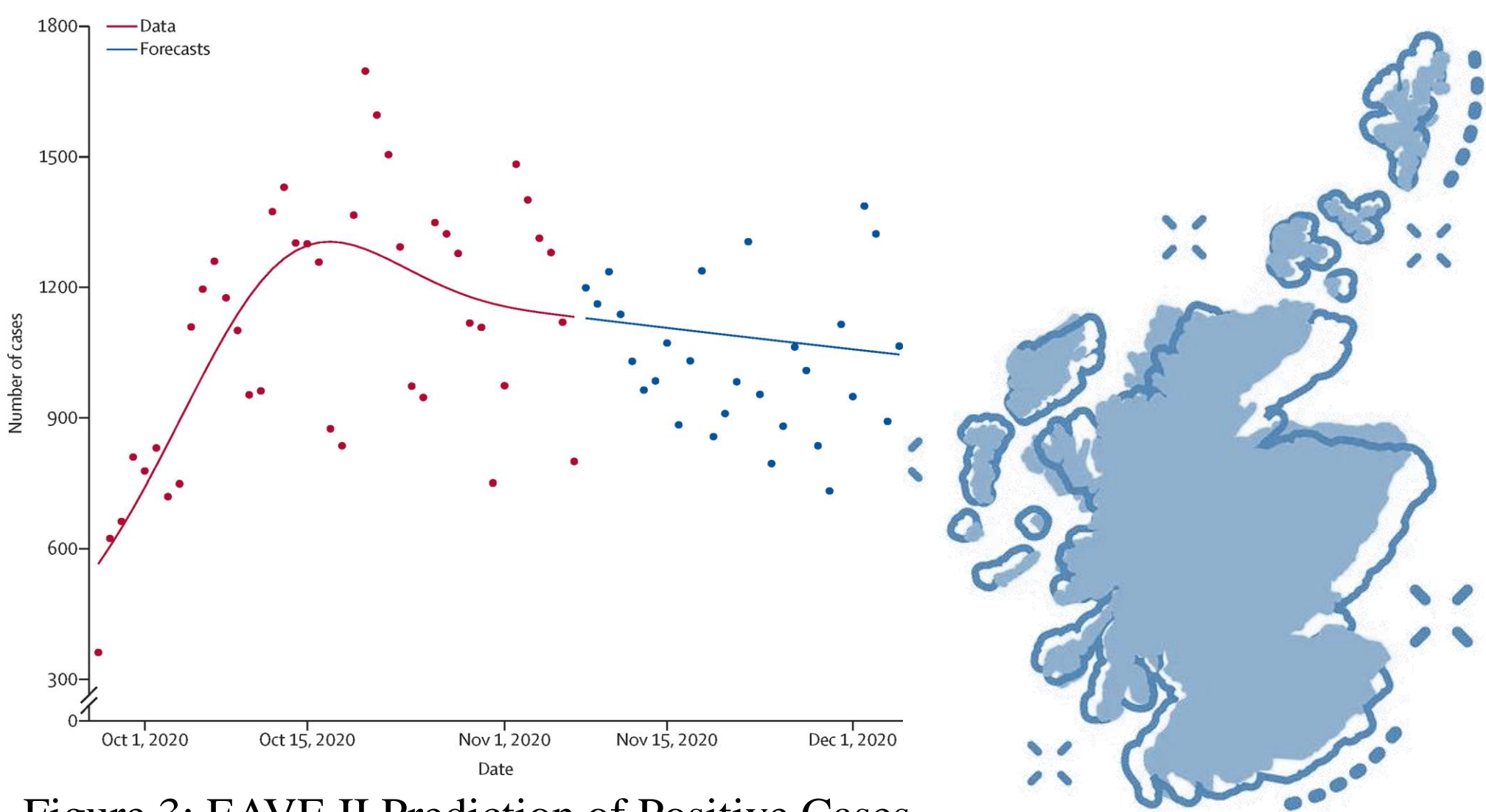


Figure 3: EAVE II Prediction of Positive Cases in the Next 30 Days
Source: [https://doi.org/10.1016/S2589-7500\(21\)00105-9](https://doi.org/10.1016/S2589-7500(21)00105-9)

5. Consideration of stakeholders

- Scottish Government, data underpinning, early deployment, improving GP wellbeing
- NHS, training new people , calming patients
- Patients, making claims, working together to develop next steps

7. Reference

1 Nwaru, B.I., Friedman, C., Halamka, J. et al. Can learning health systems help organisations deliver personalised care?. BMC Med 15, 177 (2017).