

Improving the efficiency of infection control for Healthcare workers

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Introduction

· In case of occupational infection exposure

Test only for exposed employees
(do not test the source patient)

-Employee anxiety ↑
-Employee inconveniences ↑
-Expenses ↑
-Risk of missing follow-up tests

Need for the improvement of processing procedures

Indicators and Goals



1. Reduction ratio of per capita welfare expense usage
◎ Target: 50.0% decrease



2. Employee anxiety at the time of infection exposure
◎ Target: 2.0

Problem Analysis

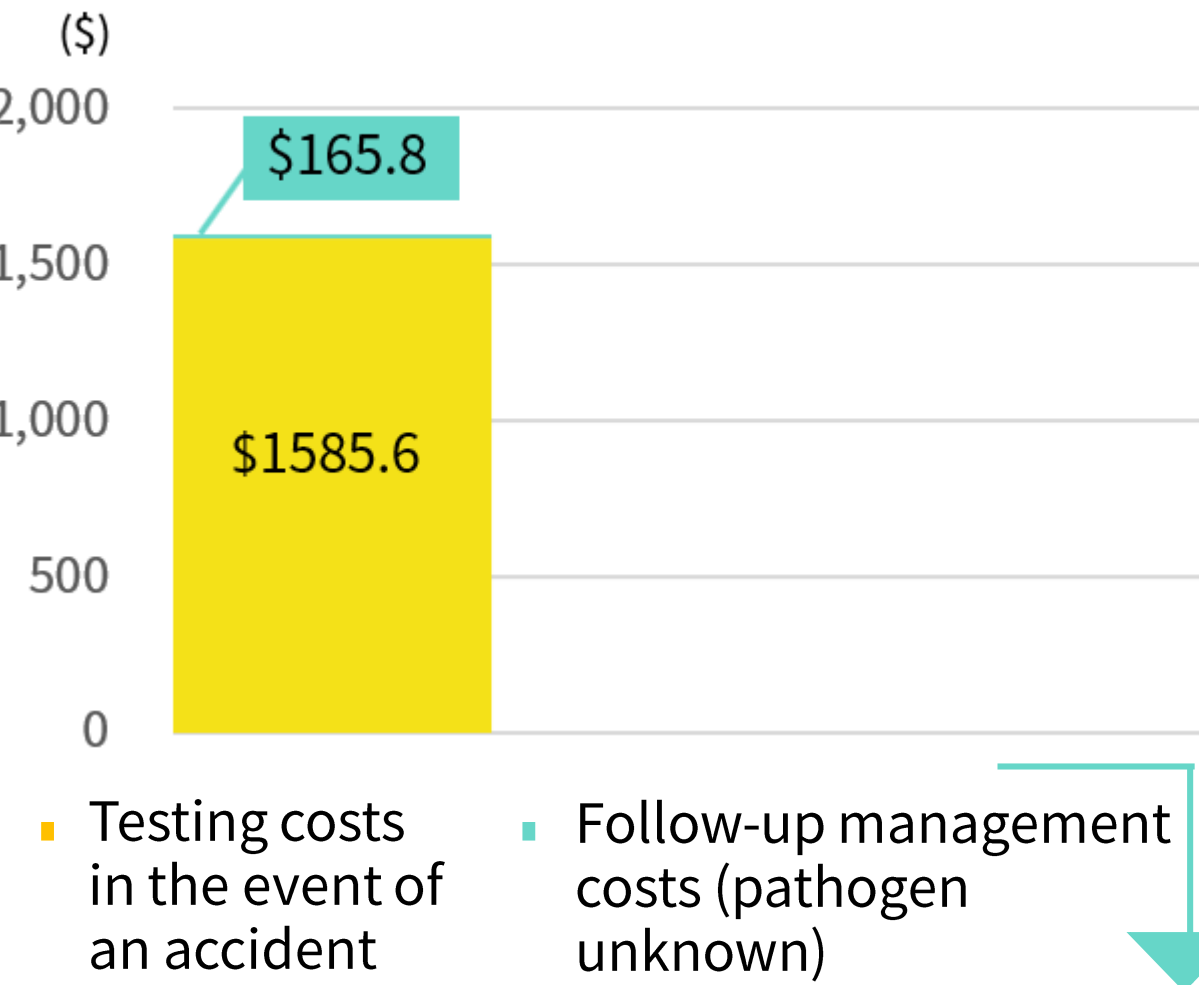
1. Problems of the Existing System



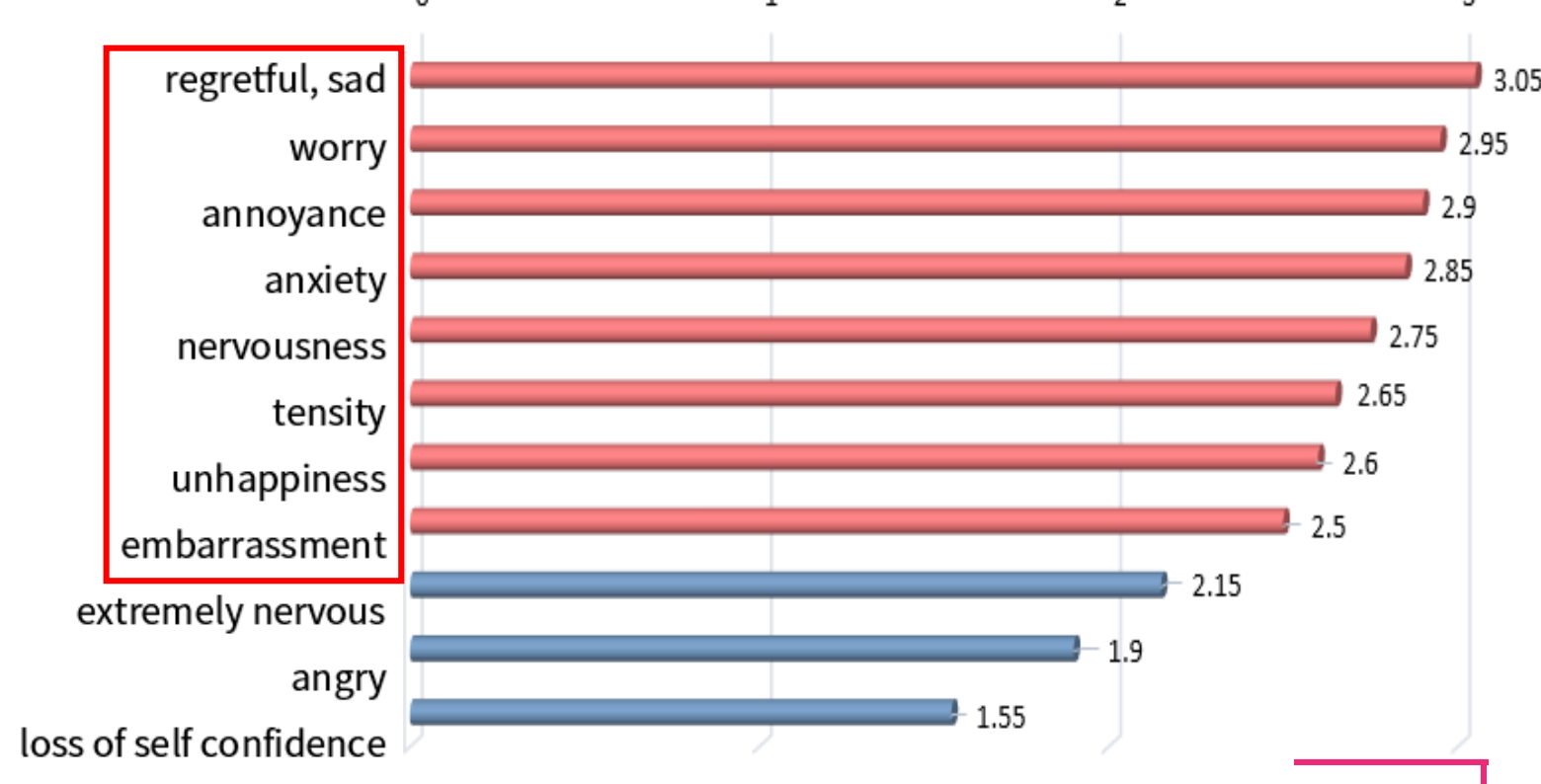
- ① Only test exposed employees and perform follow-up management in case of occupational infection exposure
- ② How should the management be conducted without the identification of the source pathogen? (Infection exposures to unknown pathogens of source patients in 2021: 35.6%)
- ③ How should the testing history of the employees be reviewed? (If the employee is anti-HBs-positive, testing is not necessary even if the source patient is a hepatitis B-positive)

2. Preliminary Investigation

1. Reduction ratio of per capita welfare expense usage
mean of \$49.26 per person
(Jul. 1 – Sep. 30, 2021)



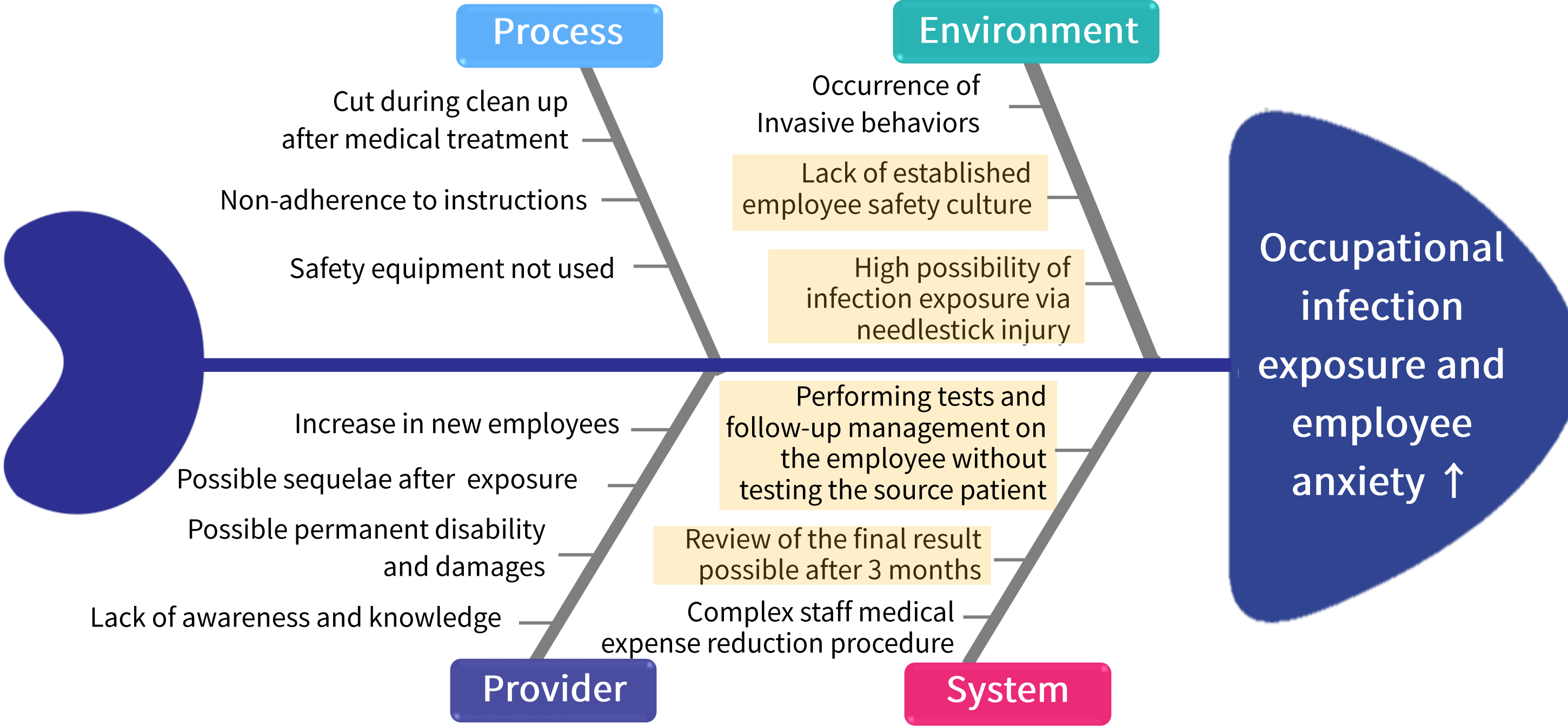
2. Employee anxiety at the time of occupational infection exposure
mean of 2.53
(Jan. 1 – Apr. 19, 2022)



“Incurrence of unnecessary costs”
First-time testing and follow-up management for employees without testing the source patient

“Increase in employee anxiety”
Testing without having identified the pathogen of the source patient

3. Cause and Effect Diagram



Strategy and Activities

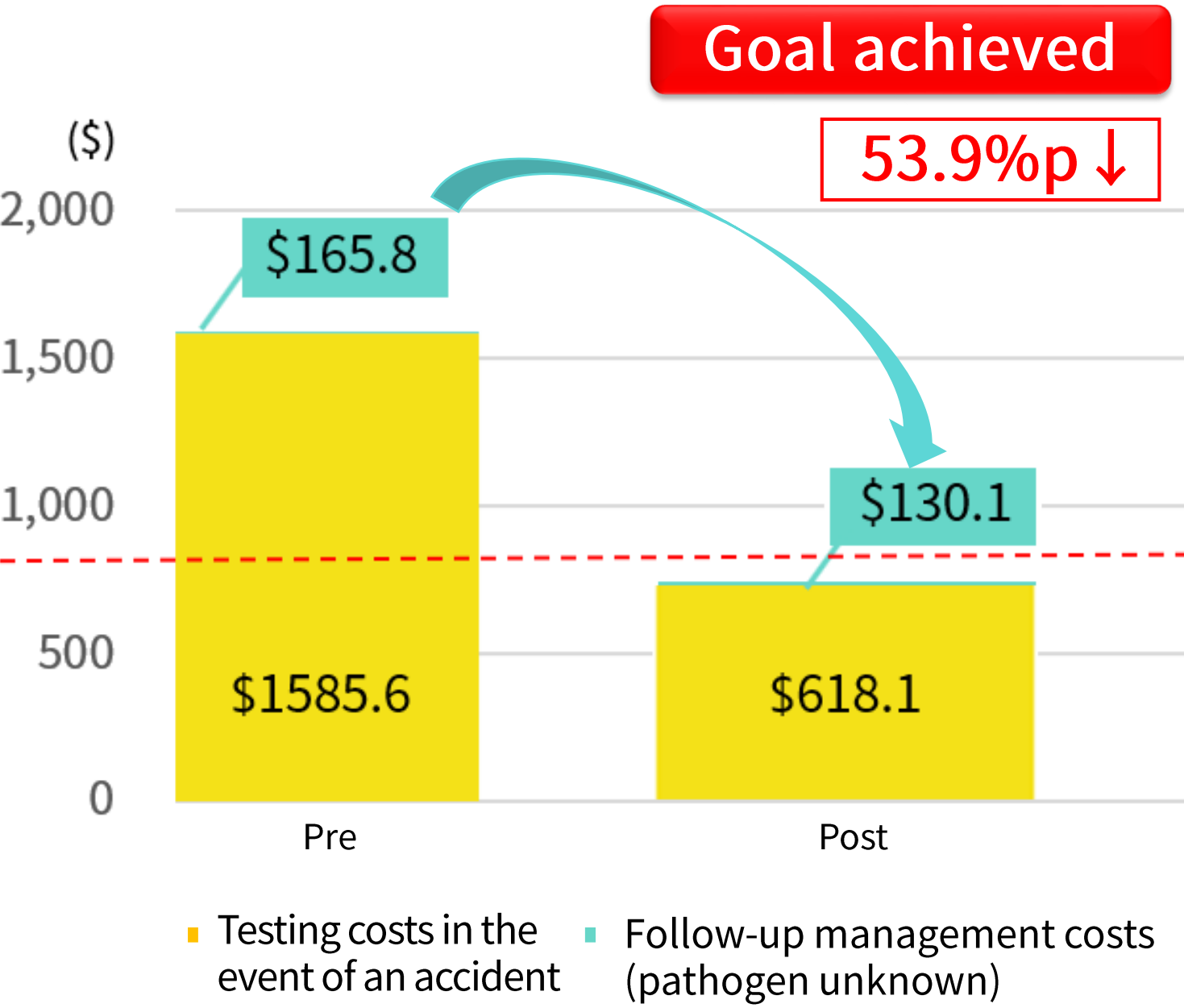
1. Compare the existing hospital policies and up-to-date infection management guidelines
 - Reference: CDC guideline, 5th edition of Infection Control and Prevention in Healthcare Facilities
2. Change processing procedures for cases of occupational infection exposure
 - Perform tests after the department head explains to the source patient (Test the employee and perform follow-up management if the source patient refuses the test)
3. Create a free testing code for the test of the source patient
4. Supplement the EMR screen for "Occupational Infection Exposure Report"
 - Check whether the source patient has blood-mediated infections, and automatically reflect it on EMR
 - Compare the tests conducted on the employee and source patient, and inform the necessary tests via pop-ups
 - Add text messaging function for prescription requests
5. Test without additional blood collection by using the stored samples
6. Activities related to changes in procedures
7. Conduct employee training



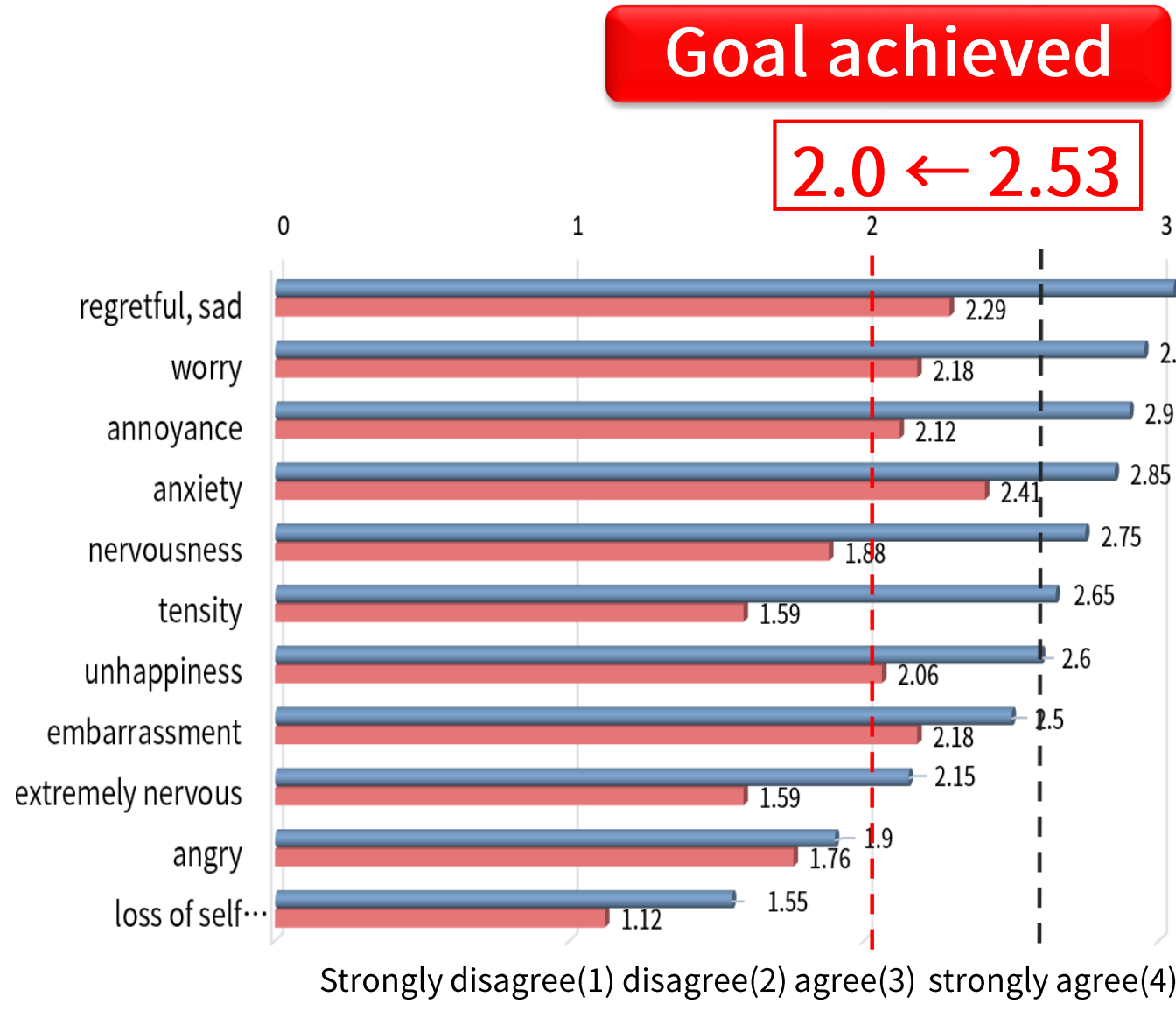
Result

Survey period
Pre ① Jan. 1 – Sep. 30, 2021
② Jan. 1 – Apr. 19, 2022
Post: Jul. 1 – Sep. 30, 2022

1. Reduction ratio of per capita welfare expense usage
mean of \$22.44 per person
(before \$ 49.26)



2. Employee anxiety at the time of occupational infection exposure
mean of 2.0 (before 2.53)



Conclusion & Suggestions

Conclusion

- ◎ Evidence-based management of employee infections by testing of blood-mediated pathogens of source patients
- ◎ Performing accurate follow-up management of exposed employees
- ◎ Improved work efficiency of infection control and prevention nurses through effective follow-up management

Suggestions

- ◎ Explore ways to expand the changed process to inpatients as well as outpatients
- ◎ Need to expand the use of training and safety injection needles to prevent occupational infection exposures fundamentally
- ◎ Continuously establish a safety culture to prevent occupational infection exposures