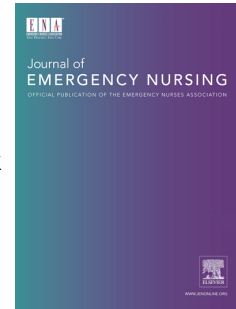




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# Journal Pre-proof



Integrated infection control strategy to minimize nosocomial infection during outbreak of COVID-19 among ED healthcare workers

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1 **Integrated infection control strategy to minimize nosocomial**  
2 **infection during outbreak of COVID-19 among ED**  
3 **healthcare workers**

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19

20 **Abbreviations**

21 Emergency department (ED)

22 Coronavirus disease 2019 (COVID-19)

23 Novel coronavirus (nCoV)

24 Healthcare workers (HCWs)

25 West China Hospital (WCH)

26

27 Dear editor,

28 On February 11, 2020, the WHO formally named the disease triggered by

29 2019-nCoV as Coronavirus Disease 2019 (COVID-19). As a newly discovered  
30 infectious disease, the outbreak and spread of COVID-19 shocked the whole world. In  
31 just a short period of two months, more than 80, 000 in China and a total of 12669  
32 people in 76 countries outside of China had been infected<sup>[1]</sup>. Due to the lack of  
33 sufficient understanding and complete protection of COVID-19 in the early stage,  
34 more than 3000 health care workers (HCWs) have been infected <sup>[2,3]</sup>.The number of  
35 infections and deaths has exceeded that of the SARS outbreak in China in 2002<sup>[3,4]</sup>.  
36 Patients who complained of fever, cough and sore throat may come to the ED. As a  
37 high-risk department for receiving such patients, a large number of diagnostic,  
38 therapeutic and nursing operations will be directly exposed to the patients' respiratory  
39 secretions. In order to protect HCWs and non-infected patients from potential  
40 2019-nCoV infection, West China Hospital(WCH) and Emergency Department (ED)  
41 had taken a series of related infection control measures. We summarize the  
42 experiences during the outbreak, which might help other EDs to formulate  
43 personalized infection control programs and prevent the spread of nosocomial  
44 infection.

45 With the development of the outbreak, WCH immediately set up an  
46 trans-department emergency infection control team, which was responsible for  
47 infection control and protection management of the whole hospital. All the regulatory  
48 requirements were implemented actively by ED.

49 Adjusting and optimizing triage strategies. Perform the following management  
50 process: [Fig.1 Three-level pre-examination and triage] .

51 Setting up the epidemic fever clinic management team, formulating the fever  
52 clinic pre-examination process, COVID-19 surveillance report process and  
53 disinfection requirements after the disposal of suspected or confirmed patients.  
54 Meanwhile adjusting the layout and facilities of the fever clinic, setting up four tents  
55 urgently of EMT to expand the space scope of fever clinic, and setting up emergency  
56 fever rescue room to treat severe fever patients. In addition ,the nosocomial team of  
57 ED conducted a number of related theories and skills training.

58 After the evaluation of the existing human resources and job needs, WCH

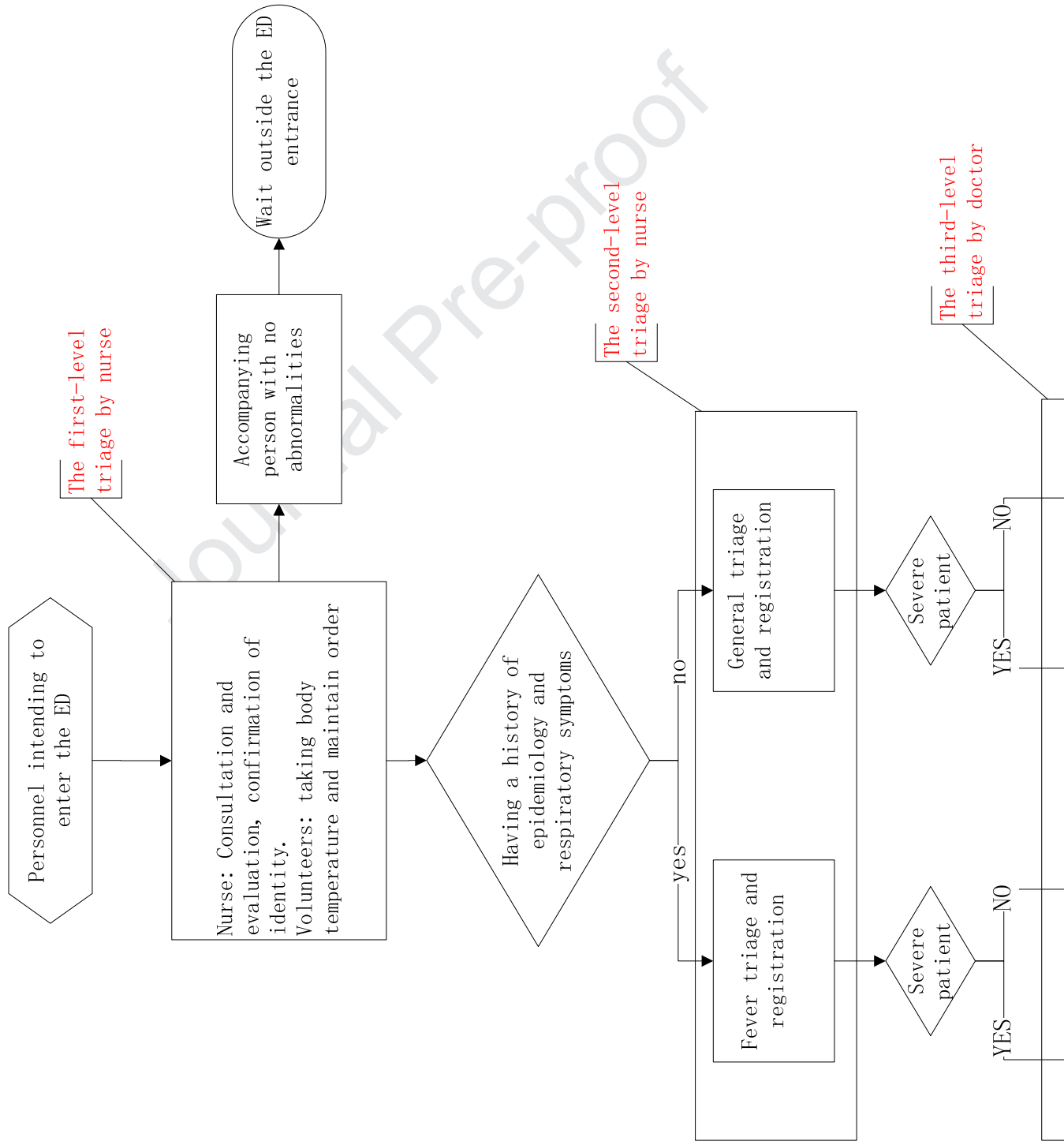
59 deployed HCWs in the hospital, and the ED combined with the internal region and  
60 post deployment of the department. WCH initiated volunteer service on the whole  
61 hospital staff (clinical HCWs, administrative logistics department, etc.), who are  
62 mainly responsible for entrance and exit management and medical guidance.

63 Improving the management of protective equipment and materials. All protective  
64 materials were managed at the three levels of hospital, department and region, and  
65 special personnel of the general nurse was responsible for them. Besides, general  
66 nurse reasonably planned and distributed materials according to the requirements of  
67 post (fever triage, fever clinic, injection room, rescue room, emergency intensive  
68 care unit, etc.) protection level.

69 It is the key to continue to keep the entrances and exits of center. To decrease the  
70 density of patients and reduce the crowding of ED, we strictly implement the  
71 companionship management system established by our department. Non-emergency  
72 patients are strictly prohibited from entering the center, no more than 2 people can be  
73 accompanied by emergency patients under special conditions, no accompany and no  
74 visitation in the rescue room and intensive care unit, and the companionship of  
75 observation room patients is strictly controlled to 1 person and fixed with  
76 accompanying certificate.

77 Up to March 4, 2020, a total of 6103 fever cases visited in our hospital, finally  
78 26 cases were confirmed as COVID-19. Up to now, no nosocomial infection has  
79 occurred in WCH and ED. We hope the experiences in infection prevention and  
80 control will benefit more HCWs and patients.

81 Fig.1 Three-level pre-examination and triage



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84 None.

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86 None.

87 **Authorship**

88 All authors have made substantial contributions to all of the following:

89 (1) Ling Wang drafted the manuscript.

90 (2) Xiaoli Chen revised the manuscript.

91 (3) Lei Ye designed the conception, and revised the manuscript for the important  
92 intellectual content.

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95

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