**Appendix 1**

*Search terms for MEDLINE(Ovid) were as follows：*

1. chronic obstructive pulmonary disease.mp

2. COPD.mp

3. acute exacerbations of chronic obstructive pulmonary disease.mp

4. AECOPD.mp

5. COPD exacerbations.mp

6. 1 OR 2 OR 3 OR 4 OR 5

7. respiratory failure.mp

8. acute respiratory failure.mp

9. 7 OR 8

10. noninvasive ventilation.mp

11. noninvasive positive pressure ventilation.mp

12. NPPV.mp

13. invasive ventilation.mp

14. invasive positive pressure ventilation.mp

15. IPPV.mp

16. sequential mechanical ventilation.mp

17. pulmonary infection control window.mp

18. PIC window.mp

19.10 OR 11 OR 12 OR 13 OR 14OR 15 OR 16 OR 17 OR18

20. mortality.mp

21. ventilation associated pneumonia.mp

22. VAP.mp

23. weaning failure.mp

24. reintubation.mp

25. duration of invasive ventilation.mp

26. total duration of mechanical ventilation.mp

27. length of stay in ICU.mp

28. length of stay in hospital.mp

29. hospital cost.mp

30. 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR27 OR28 OR29

31. 6 AND 9 AND19 AND 30