ONLINE SURVEY

Section A Characteristics & Overview

This research project investigates supply chain orientation and focuses on post disruption events in the supply of pharmaceuticals medicines within a hospital. It is concerned with how actions taken after a supply chain disruption, can have on shortage management. Shortage management is a challenge in any environment and especially important in the healthcare arena. By participating in this research, new insights can be discovered to possibly improve approaches to this problem. Please be advised that participation is entirely voluntary and you can withdraw from the study without any penalty or consequences; after submitting your answers you will have one week to notify the researcher that you wish to withdraw. Please be assured that the data collated from the responses to the questions below will be anonymised to protect identity and will remain confidential.

1. Having read the briefing statement above, and you are happy to proceed, please check the below.
   Yes
   No

2. This questionnaire is the main method of data collection. To compliment this survey and gain further information, limited telephone interviews will be conducted on a random sample basis. To be eligible for possible selection please indicate below & remember to add your e mail in the last survey question Q65.
   Yes
   No

3. What is the number of staffed beds you serve?
   <100
   100-299
   300-499
   >500

4. Is your hospital in a collaborative hub or federation?
   Yes
   No

5. What is your region?
   London
   South
   North
   Middle & East of England
   Other (please specify)

6. What is your In patient medication budget (£ million)?
   <1.5
   1.5-5.0
   >5.0-10
   >10

7. What is the number of Pharmacist FTE’s involved in your units pharmacy execution process (running orders,paying invoices,goods delivery etc.)
   0-5
   >5-15
   >15-50
   >50

8. Is your hospital in a collaborative hub or federation?
   Yes
   No

9. What is your current position title?
   Pharmacist Technician
   Lead Pharmacist Technician
   Lead Procurement Pharmacist Regional
   Pharmacist Specialist
   Other (please specify)
10. How long have you been in your current position?
- <1 year
- 1-3 years
- >3-5 years
- >5-10 years
- >10 years

11. How would you describe your degree of knowledge about disruption management?
- Not Knowledgeable at all
- Some knowledge
- Average knowledge
- Good knowledge
- Extremely knowledgeable

12. Is your hospital a standalone institute or one of several in a Trust?
- Standalone
- 2-3
- 4-5
- 6+

13. We feel the need to be alert for possible supply chain disruptions at all times.
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- Not sure/ not applicable

14. Supply chain disruptions show us where we can improve.
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- Not sure/ not applicable

15. We recognize that supply chain disruptions are always looming.
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree
- Not Sure/not applicable

16. We think a lot about how a supply chain disruption could have been avoided.
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree
- Not sure/not applicable

17. After a supply chain disruption has occurred, it is analysed thoroughly.
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree
- Not sure/not applicable

18. We feedback performance data on the alternative response taken to our regional management.
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree
- Not sure/not applicable
19. We feedback performance data on the response alternative taken to all the other regions managers.
   Strongly Disagree
   Disagree
   Neither agree nor disagree
   Agree
   Strongly Agree
   Not sure/not applicable

20. We vary our response to disruptions depending on our business unit needs.
   Strongly Disagree
   Disagree
   Neither agree nor disagree
   Agree
   Strongly Agree
   Not sure/not applicable

21. We vary our response to disruptions depending on the length of time from initial occurrence.
   Strongly Disagree
   Disagree
   Neither agree nor disagree
   Agree
   Strongly Agree
   Not sure/not applicable

22. We understand we are part of a supply chain system and compromises must be made with our supply chain partners.
   Strongly Disagree
   Disagree
   Neither agree nor disagree
   Agree
   Strongly Agree
   Not sure/not applicable

23. Do you feel you have ready access to relevant and usable information to enable correct decision making?
   Strongly Disagree
   Disagree
   Neither agree nor disagree
   Agree
   Strongly Agree
   Not sure/not applicable

Please find below in Question 24 a list of medicines that have experienced disruptions to their pharmaceutical supply chain. Please select only one of the medicines, then answer all the remaining questions 24 to 64 for the medicine you have selected in Question 24.

**Section B Medical Shortage**

24. Please select one of the following disruptions
   Lidocaine Injection
   Aciclovir Infusion Solution & Powder
   Glycopyrronium Bromide Injection
   Ketamine Injection
   Lorazepam Injection
   Other (please specify)

25. What was the severity of the disruption?
   No impact
   Slight impact
   Moderate impact
   Strong impact
   Extreme impact

26. In which month did the initial disruption occur?
   January
February
March
April
May
June
July
August
September
October
November
December

27. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Make us more independent of this supplier or the purchased item.
Never
Seldom
Sometime
Often
Almost always

28. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Increase our protective barriers against disturbances in the supply of the purchased item.
Never
Seldom
Sometime
Often
Almost always

29. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Search for or develop one or more alternative supplier(s) for the purchased item.
Never
Seldom
Sometime
Often
Almost always

30. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Taken on extra staff or resources to cope with such disruptions.
Never
Seldom
Sometime
Often
Almost always

31. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Modified/developed policies (care plans/guidelines)
Never
Seldom
Sometime
Often
Almost always

32. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Purchased compounded replacement pharmaceuticals.
33. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Make us more independent of this supplier or the purchased item.
Never
Seldom
Sometimes
Often
Almost always

34. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Increase our protective barriers against disturbances in the supply of the purchased item.
Never
Seldom
Sometimes
Often
Almost always

35. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Search for or develop one or more alternative supplier(s) for the purchased item.
Never
Seldom
Sometimes
Often
Almost always

36. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Taken on extra staff or resources to cope with such disruptions.
Never
Seldom
Sometimes
Often
Almost always

37. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Modified/developed policies (care plans/guidelines)
Never
Seldom
Sometimes
Often
Almost always

38. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Purchased compounded replacement pharmaceuticals.
Never
Seldom
Sometimes
Often
Almost always

39. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Establish a closer relationship with this supplier in order to collaborate better in case of supply chain disruptions.
Never
Seldom
Sometimes
Often
Almost always

40. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Tighten the control mechanisms on this supplier (e.g., more monitoring).
Never
Seldom
Sometimes
Often
Almost always

41. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Cooperate more intensively with this supplier.
Never
Seldom
Sometimes
Often
Almost always

42. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Improve information exchange with this supplier.
Never
Seldom
Sometimes
Often
Almost always

43. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Engage in risk management activities with this supplier (e.g., development of joint contingency plans).
Never
Seldom
Sometimes
Often
Almost always

44. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Developed inter-organisational relations within your regional area
Never
Seldom
Sometimes
Often
Almost always

Medical Shortage (Continued)

45. Actions (Immediately after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Developed inter-organisational relations outside your regional area
Never
Seldom
Sometimes
Often
Almost always

46. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Establish a closer relationship with this supplier in order to collaborate better in case of supply chain disruptions.
Never
Seldom
Sometimes
Often
Almost always

47. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Tighten the control mechanisms on this supplier (e.g., more monitoring).
Never
Seldom
Sometimes
Often
Almost always

48. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Cooperate more intensively with this supplier.
Never
Seldom
Sometimes
Often
Almost always

49. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Improve information exchange with this supplier.
Never
Seldom
Sometimes
Often
Almost always

50. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Engage in risk management activities with this supplier (e.g. development of joint contingency plans).
Never
Seldom
Sometimes
Often
Almost always

51. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Developed inter-organisational relations within your regional area
Never
Seldom
Sometimes
Often
Almost always

52. Actions (8-16 weeks after the disruption)
Since the disruption, to what extent has your business unit pursued, or made plans to pursue, the following activities?
Developed inter-organisational relations outside your regional area
Never
Seldom
Sometimes
Often
Almost always

53. Of the medicine affected by the disruption, what was the percentage of the lines fulfilled during the period up to 8 weeks after the disruption first occurred?
0-25%
26-50%
51-75%
76-100%

54. What was the percentage of the lines fulfilled during the period 8 weeks to 16 weeks after the disruption first occurred?
0-25%
26-50%
51-75%
76-100%

55. What was the average time to fulfil order during the period up to 8 weeks after the disruption first occurred?
Immediate
1 day
2-3 days
4-5 days
>6 days

56. What was the average time to fulfil order during the period 8 to 16 weeks after the disruption first occurred?
Immediate
1 day
2-3 days
4-5 days
>6 days

57. What was the proportion of orders satisfied in full during the period up to 8 weeks after the disruption first occurred?
0-25%
26-50%
51-75%
76-100%

58. What was the proportion of orders satisfied in full during the period 8 weeks to 16 weeks after the disruption first occurred?
0-25%
26-50%
51-75%
76-100%

59. Were there any procedures delayed or cancelled as a result of the disruption?
Yes
No

60. Were any patients stay prolonged?
Yes
No

61. Was there any change in practice?
Yes
No

62. Was there any compromised patient care?
Yes
63. Were patient(s) given suboptimal care?
   Yes
   No

64. Was there any health consequences?
   Yes
   No

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