

**Supplemental file 2.** Patient journey for NHS 111 referred patients to community pharmacy for emergency repeat medication supplies via current state and future state PERMSS.

Current state of patient journey			Future state of patient journey		
Step	Activities	Notes	Step	Activities	Notes
1 Δ	Patient calls NHS 111.		1 Δ	Patient calls NHS 111.	
2 ¥	Call handler picks up call and collects demographic data.		2 ¥	Call handler picks up call and collects demographic data.	
3 ¥	Call handler identifies as 'emergency supply' or otherwise.	No check of Controlled Drug at this stage.	3 ¥	Call handler identifies as 'emergency supply' or otherwise.	No check of Controlled Drug at this stage since no drug information is collected at all.
4 Ø ¥	Call handler undergoes 'triage assessment'.	Patients presents as unwell and directed to appropriate service.	4 Ø ¥	Call handler undergoes 'triage assessment'.	Patients presents as unwell and directed to appropriate service.
5	Frequency and time for next dose determined.		5 Ø ¥	Available pharmacy provision checked.	Patient may refuse pharmacist referral.
6 Ø ¥	Available pharmacy provision checked.	Patient may refuse pharmacist referral.	6 ¥	Patient is advised of pharmacy address.	
7 Δ	Call handler required to log into PharmOutcomes which is external to the NHS 111 Pathways system.		7	Pharmacy for the referral is selected and call is closed.	
8 Π	Demographics entered.		8	Referral received by Community pharmacy on PharmOutcomes via accredited an inter-operability toolkit system. This tool pushes data from the NHS Pathways system automatically onto PharmOutcomes to make the referral.	
9 ∞	Names of drugs and dosages entered, and calculate 7 days' supply that is required (if there are >4 drugs have to make another PharmOutcomes entry, go back to step 7).	Includes correct spelling, dosages, strengths, all of which is collected by a non-clinical member of staff. Again no check of controlled drugs.	9 ¥	Patient presents at community pharmacy.	

<b>10 Π</b>	Match Directory of Services to PharmOutcomes, i.e. final pharmacy on PharmOutcomes list.		<b>10 Ø ¥</b>	Community pharmacist undertakes clinical assessment of the patient.	An emergency supply may not be required, is clinically inappropriate, or requires further clinical assessment. In the latter case the patient should receive onward referral to an appropriate service.
<b>11 Ø ¥</b>	Call handler checks that the patient has proof that this is a repeat medication.	Patient may not have proof of current medication to provide to the pharmacist.	<b>11 Δ Ø</b>	Community pharmacist checks stock.	Stock may not be available. Pharmacist has option to refer to another pharmacy.
<b>12</b>	Send referral to nominated community pharmacy.		<b>12 ¥</b>	Community pharmacist supplies medications.	
<b>13 ¥</b>	Patient is advised of pharmacy address.		<b>13 Ø ¥</b>	Community pharmacist provides any appropriate additional pharmaceutical services or offers advice.	Patient leaves pathway with a medication supply.
<b>14 ¥</b>	Patient presents at community pharmacy.		<b>14 ¥</b>	Post-consultation completed on PharmOutcomes.	
<b>15 Δ</b>	Community pharmacist checks PharmOutcomes for referral.		<b>15 Π</b>	Emergency supply record made as per community pharmacy standard operating procedure.	
<b>16 Δ Ø</b>	Community pharmacist reviews referral.	Some pharmacists may check for accurateness of data within the referral, such as strength, and dosage, and use this in their clinical judgement to reject or action a referral.	<b>16 ¥</b>	Electronic feedback sent to GP.	
<b>17 Π Ø ¥</b>	Community pharmacist undertakes clinical assessment of the patient.	An emergency supply may not be required, or is clinically inappropriate. If			

		a patient requires further clinical assessment then they should receive onward referral to an appropriate service.		
18 $\Delta \emptyset$	Community pharmacist checks stock.	Stock may not be available. Pharmacist could refer to another pharmacy if the stock is found elsewhere.		
19 $\text{¥}$	Community pharmacist supplies medications.			
20 $\emptyset \text{¥}$	Community pharmacist provides any appropriate additional pharmaceutical services or offers advice.	Patient leaves pathway with a medication supply.		
21 $\text{¥}$	Post-consultation completed on PharmOutcomes.	Not standard procedure to enter details onto PharmOutcomes for a non-PERMSS emergency supply.		
22 $\text{  }$	Emergency supply record made as per community pharmacy standard operating procedure.			
23 $\text{¥}$	Electronic feedback sent to GP.			

$\Delta$  = Patient wait,  $\emptyset$  = Patient exit point,  $\text{||}$  = Duplication of activities,  $\infty$  = bottleneck,  $\text{¥}$  = add value