

# Barriers to Dispatcher Assisted CPR (DA-CPR) in Singapore

*Factors preventing the start of telephone CPR*

Ms. Zariel Sim

<b>x2</b> Bystander CPR	<b>RAPID</b> CPR administration
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# Why *Dispatcher-Assisted CPR* ?



<b>LOW</b> OCHA survival rate	<b>20%</b> Bystander CPR
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United States, 2003

64% Mistook agonal breathing

37% Physical limitations

King country, 2002

57% Unnecessary questions

29% Not with patient

London Ambulance Service, 2004

49% Barriers present

Characterize

# BARRIERS

delaying or preventing

*successful DA-CPR* in **Singapore**

July  
2012

March  
2015

*32 months*

**1157** Dispatch  
recordings

- ✓ Complete
- ✓ No Bystander-CPR in progress

1

Recognise need for CPR

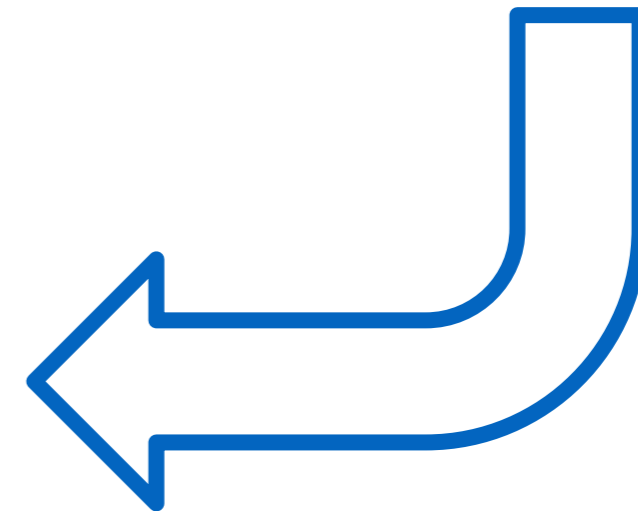
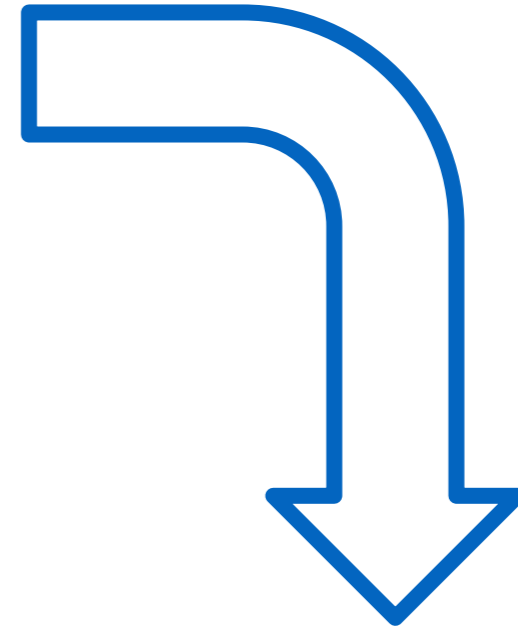


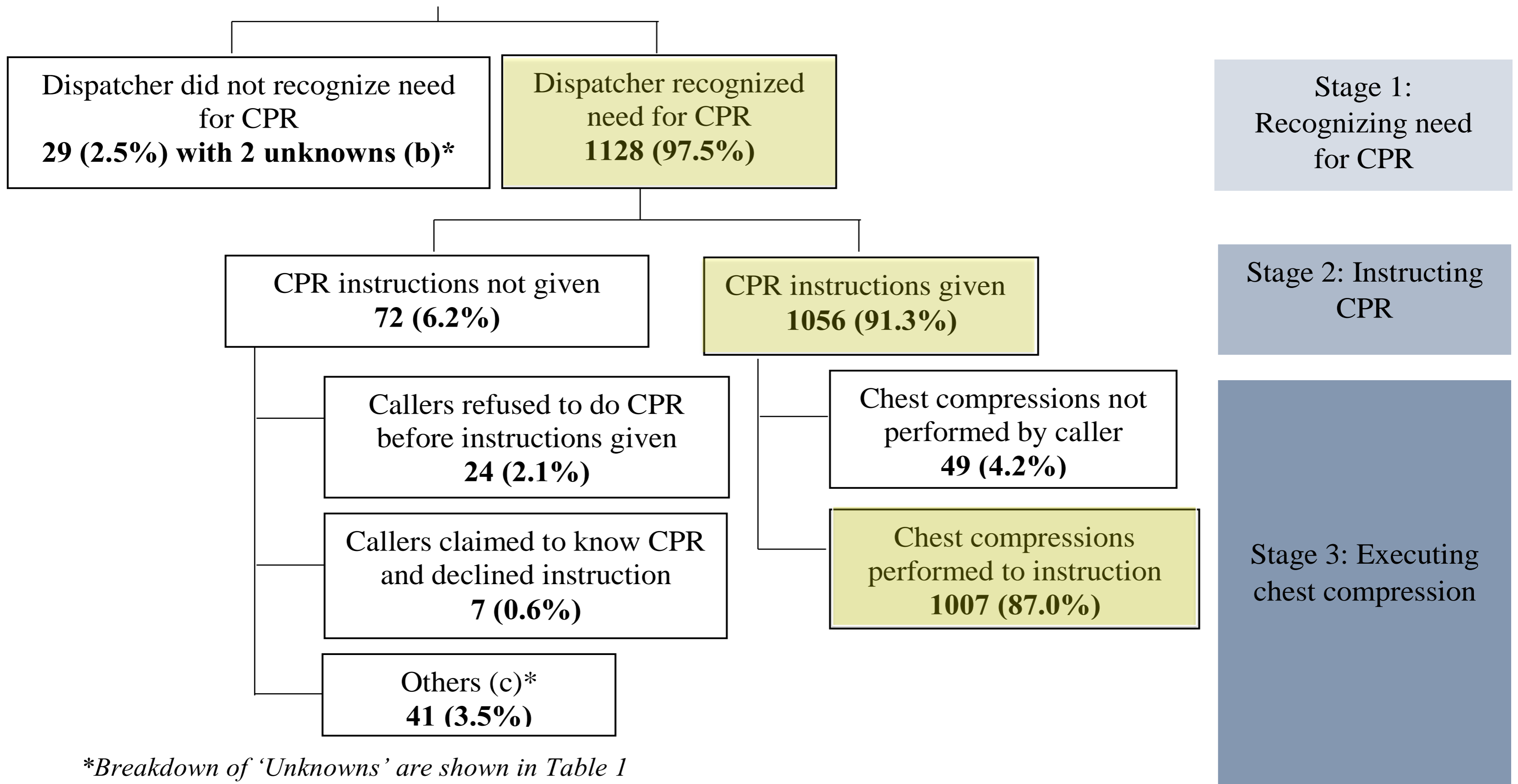
2

Begin CPR instructions

3

First chest compressions





*\*Breakdown of 'Unknowns' are shown in Table 1*

Barriers to DACPR	n (%)
Couldn't move patient	118 (27)
Caller refused	64 (15)
Hang up phone	47 (11)
Phone disconnected	31 (7)
Caller hung up	30 (7)
Overly cautious	23 (5)
Caller with patient	20 (5)
Difficult access to patient	16 (4)
Language barrier	15 (3)
Others: Quality of instructions, Technical difficulties, Help arrived	117 (27)

37.2%

Overly cautious

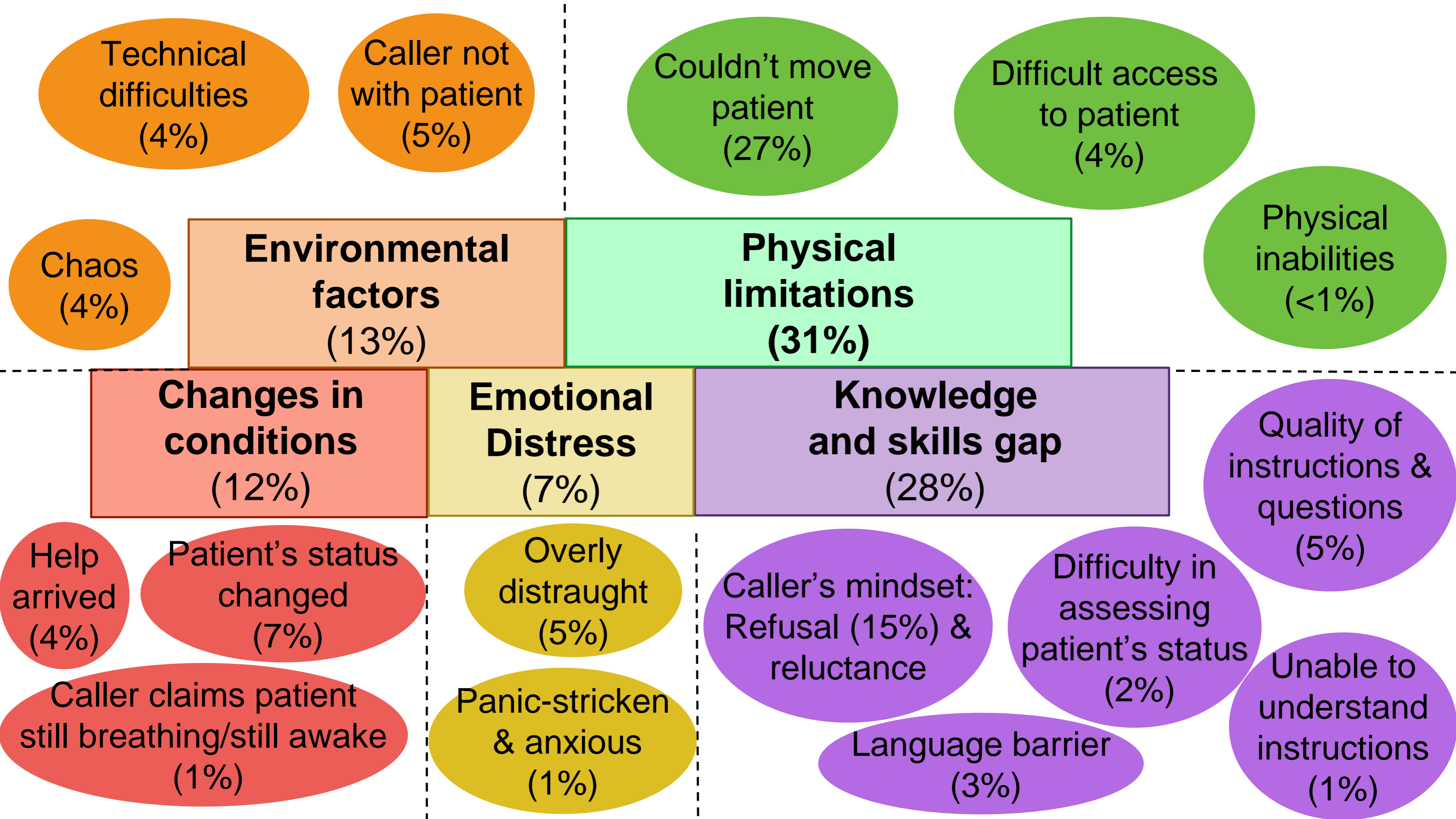
Caller with patient

Difficult access to patient

Language barrier

Others: Quality of instructions, Technical difficulties, Help arrived





Technical difficulties (4%)

Caller not with patient (5%)

Couldn't move patient (27%)

Difficult access to patient (4%)

Physical inabilities (<1%)

Chaos (4%)

**Environmental factors**  
(13%)

**Physical limitations**  
(31%)

**Changes in conditions**  
(12%)

**Emotional Distress**  
(7%)

**Knowledge and skills gap**  
(28%)

Quality of instructions & questions (5%)

Help arrived (4%)

Patient's status changed (7%)

Overly distraught (5%)

Caller's mindset: Refusal (15%) & reluctance

Difficulty in assessing patient's status (2%)

Unable to understand instructions (1%)

Caller claims patient still breathing/still awake (1%)

Panic-stricken & anxious (1%)

Language barrier (3%)

	Total (N=1157)	No Barriers (n=727)	One or more barriers (n=430)	P-value
Recognized need for CPR? (%)	1128 (97.5)	720 (99.0)	408 (94.9)	<0.001
CPR instructions started? (%)	1056 (91.3)	715 (98.3)	341 (79.3)	<0.001
Chest compression started? (%)	1007 (87.0)	715 (98.3)	292 (67.9)	<0.001

**Less likely** for key stages to occur

Key stages	All		No Barrier		Barrier		P-value
	Mdn	IQR	Mdn	IQR	Mdn	IQR	
Time dispatcher recognizes need for CPR, secs (n= 1032)	62	45-100	60	43 - 93	68	48 - 114	<0.001
Time dispatcher begins instructions, secs (n=711)	140	102-190	131	100 - 175	159	110 - 219	<0.001
Time to first compression, secs (n=890)	211	164-270	200	160 - 254	240	180 - 330	<0.001

**Significantly longer** time taken to reach key stages

**97.5% Recognized need for CPR**

**91.3% CPR instructions given**

**87% Chest compression performed**

**Less likely  
for key stages to occur**

**Significantly longer  
time taken to reach key  
stages**

**31%  
encountered physical  
barriers**

**THANK YOU!**