

Chapter III

**Implementation of
Dial 100 System**

Chapter-III: Implementation of Dial 100 System

The system suffered inherent deficiencies at the planning stage which impacted the ability of the system to deliver as could be evidenced in the delays in response. For instance, the number of First Response Vehicles to be deployed was arrived at on a simplistic assumption of one Vehicle per police station, without taking into account other factors that would affect response time like traffic and road conditions, crime rate as well as geographical conditions. Similarly, the work of dispatchers was fixed district-wise leading to skewed distribution of calls and consequently, delays in dispatch of calls.

The project envisaged that a FRV will reach the scene within five minutes after a call in urban areas and within 30 minutes in rural areas. On an average, the FRVs reached the scene 24 minutes after a call in urban areas; it took 56 minutes in rural areas. Delays in dispatch were found in 90 per cent of events and delay in reaching of FRVs to the site were found in 65 per cent of events. Such delays also occurred in serious events like rape, domestic violence, kidnapping etc. The delays defeat the objective of dial 100 system to provide rapid response to distress calls.

We noticed that there was no improvement in the response time to distress calls over the period 2016-19. The delayed responses were not appropriately analysed for remedial action by officers who were responsible for monitoring the operation of the system.



Photo showing running First Response Vehicle

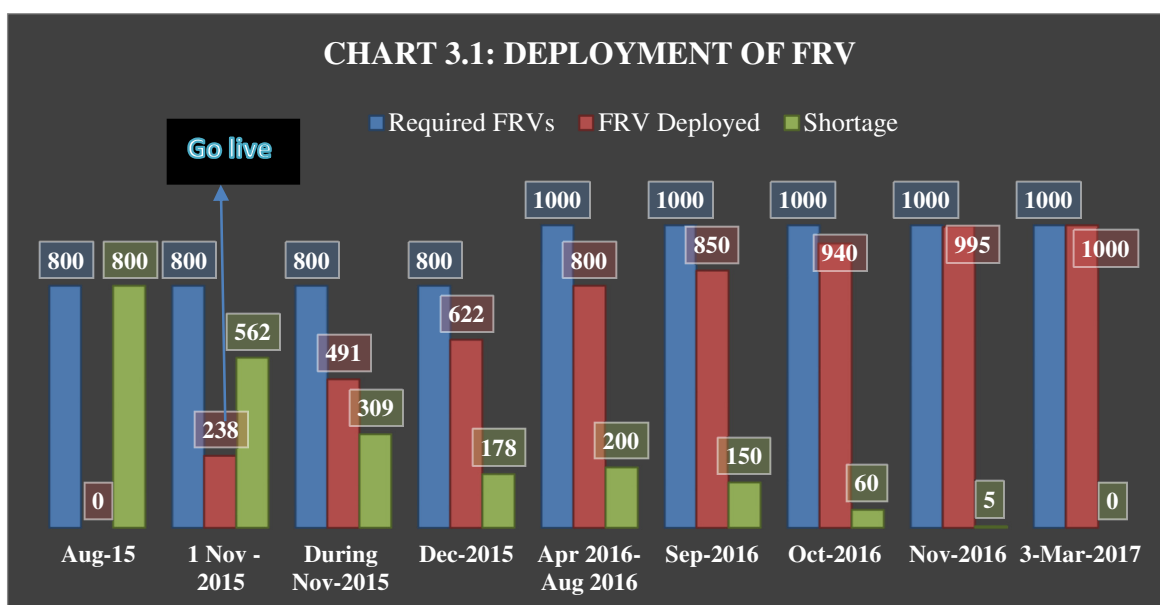
Over the period 2016-20, Dial 100 received 102.9 lakh calls annually, of which 20.7 lakh calls were found actionable. The gap of 82.2 lakh calls annually, representing 80 per cent of the calls were categorized as blank or prank or abusive calls or where the address could not be found. But no review was conducted of these unaddressed calls; the missed call desk was not established. Our analysis of the dump data provided by the department (containing data on 47.2 lakh calls pertaining to the period 2016-19) revealed that 79 per cent were either assigned a null value or invalid¹ value in dispatch of FRVs. Thus out of every 100 calls made to the system, only 20 were categorised as

¹ Time of dispatch was prior to the dispatch assigned.

actionable and out of these actionable calls only two had valid data in the system that supported dispatch of a FRV. As a result of data inconsistencies, we could not draw an assurance on the correctness of the data provided for analysis in audit.

3.1 Deployment of FRVs

The department used the existing number of police stations (900) as the basis to arrive at the requirement of 1000 FRVs in 2013-14, thus providing at least one FRV per police station. This was to be done in a phased manner, with provision of 800 FRVs on 1 August 2015 and remaining 200 FRVs on 1 April 2016. However, on the date of Go Live on 1 November 2015, the System Integrator could deploy only 238 FRVs which was less than 25 per cent of the requirement and increased to the required 1000 FRVs after six to 11 months (March 2017) from the targeted dates (Chart 3.1).



The Government acknowledged (August 2021) the delay and stated that the implementation of the project involved various steps² which took more time than scheduled, because of which the Go-Live was delayed (1 November 2015) against the scheduled date of 20 August 2015. Penalty of ₹ 35.42 lakhs were deducted from the bills of the System Integrator.

² Such as site preparedness for Call Centre, preparation of the GIS Database for Dial 100 and preparation of FRV jurisdiction by district police force. The FRVs were to be fitted with the Mobile Data Terminal (MDT) and the delivery of the MDT was delayed. All other processes like RTO registration, stickering of FRVs, training of drivers and supervisors were being performed by the respective organisations, which took more time as per the schedule.

3.1.1 Availability of FRVs

The System Integrator was required to make available at least 95 *per cent* FRVs (950 out of 1000 FRVs) at any point of time as per contract. Further, the System Integrator was also required to replace any FRV, if the deployed FRV was not available for any reason such as repair, non-availability of driver, etc. Our analysis showed one to eight *per cent* of FRVs were off-road during January 2018 to September 2020³. Against the permissible five *per cent* margin i.e., 49500 FRV days, we found that the non-availability of FRVs worked out to 29527 FRV days. Our physical verification (January/March 2021) of FRVs in eight selected districts revealed that 67 FRVs (24 *per cent*) out of total 274 FRVs deployed in these districts, were off-road. Further, out of 103 selected FRVs, 20 FRVs (19 *per cent*) were off-road for the period ranging between one and 111 days against which the System Integrator failed to provide any replacement FRV. Consequently, nearby FRVs were forced to share the workload.

The Government stated (August 2021) that in the event of unexpected increase in FRVs off-roads throughout the project duration, the department issued warning letters to System Integrator. However, we noted that the meagre amount of penalty⁴ did not have the salutary impact on provision of the contracted services.

3.2 Operational Performance of Dial 100 system

Under the Dial 100, the dispatcher is required to dispatch the call to a FRV in one minute, and to the Mobile Data Terminal (MDT) system of the FRV as well as on web portal within three minutes. Dispatcher software assists in selection of FRV for dispatch and the dispatcher also finds the shortest route to guide FRV with the help of GIS based map. The FRV team— after receiving / acknowledging an event from the dispatcher —would reach the place of event (Scene) within five minutes in urban areas and within 30 minutes in rural areas. The following paragraphs detail our findings serially on (i) dispatch following a call and (ii) arrival of FRVs at the scene.

3.2.1 Dispatch of calls

The Reports provided by the Department showed that the Dial 100 system received 514.4 lakh distress calls during the period January 2016 to September 2020 (Table 3.1).

³ For November 2019 and January 2020, no data is available.

⁴ ₹ 500 per FRV per day from 31 to 45 days, ₹ 1000 per FRV per day from 46 to 60 days and ₹ 2000 per FRV per day more than 60 days.

Table 3.1: Calls received at Dial 100 Call Centre

(Numbers in lakh)

Year	Total calls	Non-actionable⁵ calls (Per cent)	Actionable calls (Per cent)	Dispatches (Per cent)
2016	174.2	155.2 (89)	19.0 (11)	17.4 (92)
2017	86.4	65.2 (75)	21.2 (25)	21.1 (99)
2018	93.9	72.0 (77)	21.8 (23)	21.8 (99)
2019	93.0	69.7 (75)	23.3 (25)	22.3 (96)
2020	66.9	48.6 (73)	18.3 (27)	17.3 (94)
Total	514.4	410.7 (80)	103.6 (20)	99.9 (96)

Source: MIS Reports provided by the Department.

Our analysis showed the following:

- Over the period 2016-20, Dial 100 received 102.9 lakh calls annually, of which 20.7 lakh calls were found actionable. The gap of 82.2 lakh calls annually, representing 80 *per cent* of the calls were categorized as blank or prank or abusive calls or where the address could not be found. The Department did not conduct any review of the calls to ensure that the calls categorized as non-actionable, were indeed non-actionable. Thus actionable calls formed only 20 *per cent* of the calls received in Dial 100, the incidence improving over the period 2016-20.

Missed or Blank calls

Dial 100 provided for a missed call desk which was to be established to verify missed calls and in case of doubt, FRV was to be dispatched for verification. Minimum three call back was to be done where from missed call was received. If the number was found switched off or out of coverage area, action was to be taken on such missed call. We noticed that missed call desk was not established and no action was taken on any of the missed or blank calls during 2015-2020. The Government attributed (August 2021) the lapse to heavy flow of calls. During the Exit Conference ACS, Home agreed that in case of call disconnection, the caller should be contacted back as it is possible that because of certain situation the caller may not be in a position to continue the call.

Recommendation 2:

The department may institute a mechanism for periodic review of calls categorized as non-actionable and establish the Missed Call desk.

⁵ Blank calls, Prank, enquiry/abusive, etc.

- The data derived from the system showed that 96 *per cent* of the actionable calls were dispatched to the FRVs. The data logged in the Call Centre (data dump) showed that the dispatch was 43 *per cent* (Table 3.2) lower than the numbers reported in the MIS during 2016-19. However, we noted improvement in the quality of the data over the period, with the difference brought down significantly to 25 *per cent* in 2018-19. The department stated that the difference could be because the dump data did not contain the data of call centre events, non-productive events and multiple dispatches of FRVs. We are of the opinion that without a reconciliation of data, the Department cannot draw an assurance that there was no actionable distress calls that was not provided a response.

Table 3.2: Data mismatch

(Numbers in lakh)

Year	Total events dispatched as per MIS	Total Events Dispatched as per the data logged (<i>Per cent</i>)	Difference (<i>Per cent</i>)
2016	17.4	7.8 (44.8)	9.6 (55.2)
2017	21.1	6.1 (28.9)	15.0 (71.1)
2018	21.8	16.1 (73.9)	5.7 (26.1)
2019	22.3	17.2 (77.1)	5.1 (22.9)
Total	82.6	47.2 (57.1)	35.4 (42.9)

Source: MIS Reports and Data provided by the Department.

- The data dump had null value in 76 *per cent* events dispatched and in respect of three *per cent* events, the time of dispatch was prior to the dispatch assigned (invalid data). Thus, we could analyse the data in respect of only 21 *per cent* events. Thus, out of every 100 calls made to the system, only 20 were categorized as actionable and out of these actionable calls only two (11.43 *per cent*) had valid data in the system that supported dispatch of FRVs. As a result of data inconsistencies, we could not draw an assurance on the correctness of the data provided.

The Project Management Consultant did not ensure that complete and useable data was generated to monitor the service level provided by the System Integrator.

Recommendation 3:

The department may examine the causes behind data inconsistencies and ensure that clean and complete data is available for supervisory review.

- Our analysis of the data dump (Table 3.3) showed that the requirement of a dispatch within three minutes of a call was achieved in less than 22 *per cent* of the calls, with no significant improvement over time. Around 75 *per cent* of the calls were dispatched within four to 60 minutes, 24 *per cent* of calls dispatched within 61 to 180 minutes and few calls

dispatched up to 12 hours (Table 3.4). There were significant delays even in serious events like rape, domestic violence, kidnap of female etc. as shown in the Chart 3.2. Delay in dispatches noticed during the period 2016-19 involved serious crimes like rape (302), attempt to rape (825), female kidnapping (1,130), family disputes (1,16,807) and domestic violence (24,909) (**Appendix 3.1**).

Table 3.3: Details of delay in dispatching the events

Year	Events (In lakh)			Dispatch (In number)	
	Total	Null or Invalid ⁶	Valid	Within three minutes (per cent)	> three minutes (per cent)
(1)	(2)	(3)	(4)	(5)	(6)
2016	7.8	7.5	0.3	6245 (21.8)	22364 (78.2)
2017	6.1	5.0	1.1	17648 (15.9)	93714 (84.1)
2018	16.1	12.3	3.8	38789 (10.3)	339688 (89.7)
2019	17.2	12.7	4.5	37663 (8.2)	419182 (91.8)
Total	47.2	37.5	9.7	100345 (10.3)	874948 (89.7)
<i>Per cent</i>		79.4	20.6	10.3	89.7

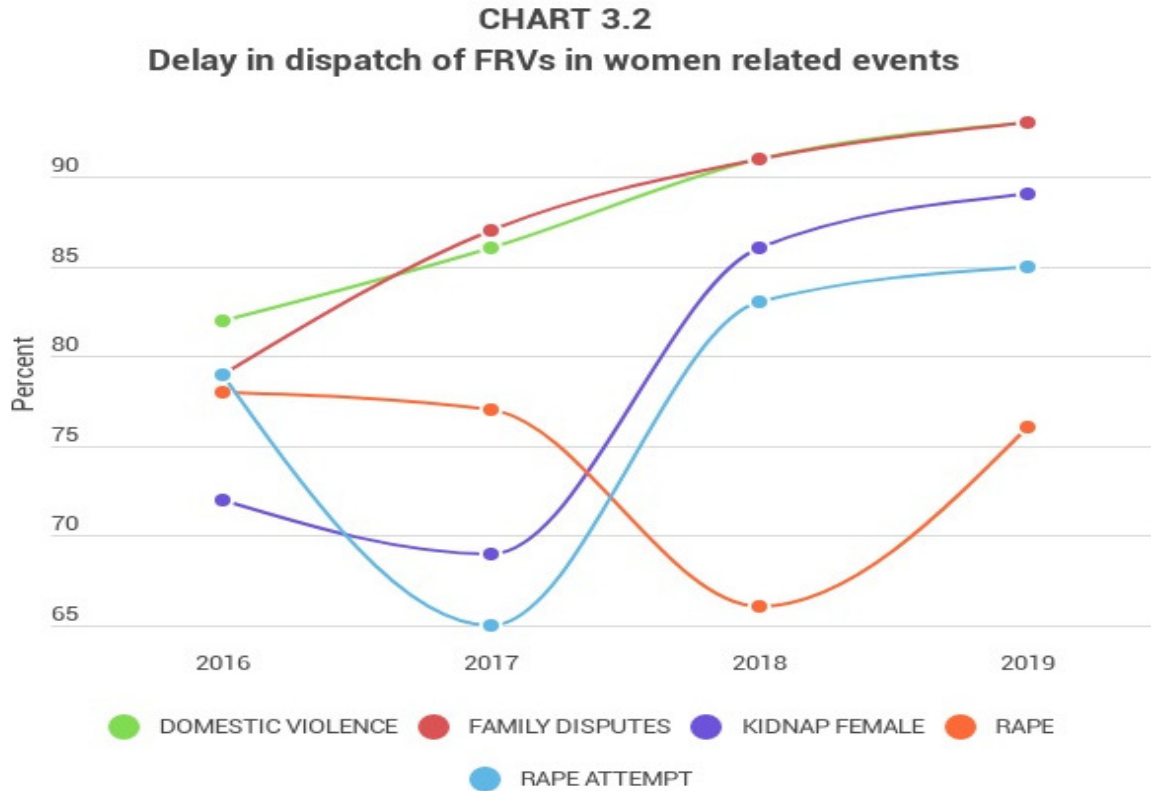
Source: Data provided by the Department.

Table 3.4: Range wise delay in dispatching the events

Year	No. of events dispatched in more than three minutes	Time taken for dispatch (in minutes)				
		04-60	61-180	181-360	361-540	541-720
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2016	22364	15345	6354	594	61	10
2017	93714	75458	17499	697	53	7
2018	339688	255932	81089	2545	109	13
2019	419182	308047	108041	2996	87	11
Total	874948	654782	212983	6832	310	41
<i>Per cent</i>		74.8	24.3	0.8	0.04	0.01

Source: Data provided by the Department.

⁶ Time of dispatch was prior to the dispatch assigned.



The delay in dispatch defeats the objective of Dial 100 system to provide rapid response to distress calls. The Government stated (August 2021) that the event once received by the dispatcher was immediately transferred to the concerned FRV, subject to the availability of the FRV at the event location. During peak hours, almost every FRV was assigned with two-three events and the system implemented during 2015 was capable of transferring single event to MDT at any point of time. Therefore, rest of the events were put in queue at the dispatcher end.

We noted that the assessment of FRVs was based on a simplistic assumption of at least one FRV per police station. The other factors that impinge on the requirement of FRVs like



Photo showing dispatchers' section

district-wise crime rate, types of crimes, geographical conditions, traffic and road conditions etc, were not considered while assessing the requirement. *This indicated that a proper analysis of the ground realities was not carried out at the initial stages of planning, itself. As a result the FRVs could not reach the scene within the targetted response time.*

Further we noted that the work of dispatchers was fixed district wise. Since the call details are not dynamically assigned to the dispatchers, load on each dispatcher varied on an average between 120 calls to 297 calls per day as given in **Appendix 3.2**. Our findings showed that the call load analysis was not effective, leading to skewed distribution of calls among dispatchers and consequently, delays in dispatch of calls.

In reply the Government stated (August 2021) that districts were assigned among the 24 dispatchers. In case of excess event load at a particular dispatch desk, it is distributed among the desks with less load. Reply is not acceptable as no such dynamic allocation among dispatchers was noticed during audit.

3.2.2 Arrival of FRVs at the scene

The Dial 100 envisaged that the FRV team— after receiving / acknowledging an event from the dispatcher —would reach the place of event (scene) within five minutes in urban areas and within 30 minutes in rural areas.

We noted that equipment which provide real time information like Mobile Data Terminals were being used non-sequentially (on an average, 49 per cent) during 2016-19 (Table 4.3 of para 4.2.1 of the Report refers). As a result, we could not draw an assurance on data correctness.

Our analysis of the data dump showed that on an average, the FRVs reached the scene in 24 and 56 minutes after receiving a call in urban and rural areas respectively. FRVs reached the scene within five minutes in less than 13.2 *per cent* of the calls during the period 2016 – 2019 in urban areas. The adherence to the time schedule in rural areas was higher with the FRVs reaching the scene within 30 minutes in up to 59.9 *per cent* of the events. In respect of both urban and rural areas, the performance was erratic with significant variation on a year-to-year basis. Dispatched (DP) or FRV arrived (AR) events having null value were found in 51 *per cent* events during 2016-19. Thus, we could analyse delay in dispatching of events in only 49 *per cent* events. Details are shown in Table 3.5.

Table 3.5: Status of timely arrival of FRVs in Urban and Rural area

Year	Events (In lakh)		Events not pertaining to urban and rural areas (In nos.)	Valid data in the events (for urban and rural areas) (In nos.)	No. of events (Urban area) (In nos.)	Events attended within five minutes (in urban area) (In nos.)	No. of events (Rural area) (In nos.)	Events attended within 30 minutes (in rural area) (In nos.)
	Total	Null or Invalid ⁷						
(1)	(2)	(3)	(4)	(5) = (2) - (3) - (4)	(6)	(7)	(8)	(9)
2016	7.8	7.3	345	57268	32460	4274(13.2%)	24808	14849(59.9%)
2017	6.1	2.5	6123	357105	160272	14909(9.3%)	196833	113841(57.8%)
2018	16.1	7.4	8016	856618	401414	37784(9.4%)	455204	242594(53.3%)
2019	17.2	6.8	11342	1028995	450573	54864(12.2%)	578422	314638(54.4%)
Total	47.2	24.0	25826	2299986	1044719	111831(10.7%)	1255267	685922(54.6%)
<i>Per cent</i>		50.8	0.5	48.7	45.4	10.7	54.6	54.6

Source: Data provided by the Department.

We noted that FRVs reached the scene with delays in 2.5 lakh events during 2016-19. Out of these, delays only in arrival of FRVs was observed in 37,168 events (14.8 *per cent*) events whereas delay was attributable to both dispatch and arrival of FRVs in respect of 2,13,490 (85.2 *per cent*) events. Details are shown in Table 3.6.

⁷ Time of arrival of FRV was prior to dispatch.

Table 3.6: FRVs reached the scene with delay due to delay in dispatch and arrival of FRVs

Year	Events					
	Total (In lakhs)	With delay (In nos.)		Having value of DA, DP and AR and delay in arrival ⁸ (In nos.)	Delay in arrival where dispatch in time (In nos.)	Delay in arrival due to delay in dispatch and arrival of FRVs (In nos.)
2016	7.8	Urban	28186	224	108	116
		Rural	9959	63	35	28
2017	6.1	Urban	145363	22772	5097	17675
		Rural	82992	12909	2527	10382
2018	16.1	Urban	363630	63646	9599	54047
		Rural	212610	35099	4661	30438
2019	17.2	Urban	395709	72336	9997	62339
		Rural	263784	43609	5144	38465
Total	47.2	Urban+Rural	1502233	250658	37168	213490
		Urban	932888	158978	24801	134177
		Rural	569345	91680	12367	79313
Per cent		Urban+Rural			14.8	85.2
		Urban			15.6	84.4
		Rural			13.5	86.5

(Source: Data provided by the Department)

We also noticed that FRVs reached the scene with delays ranging from 31 to 720 minutes. Details are shown in Table 3.7. These included serious events like rape, domestic violence, and kidnap of female etc. as shown in Chart 3.3. Further details are at *Appendix 3.3*.

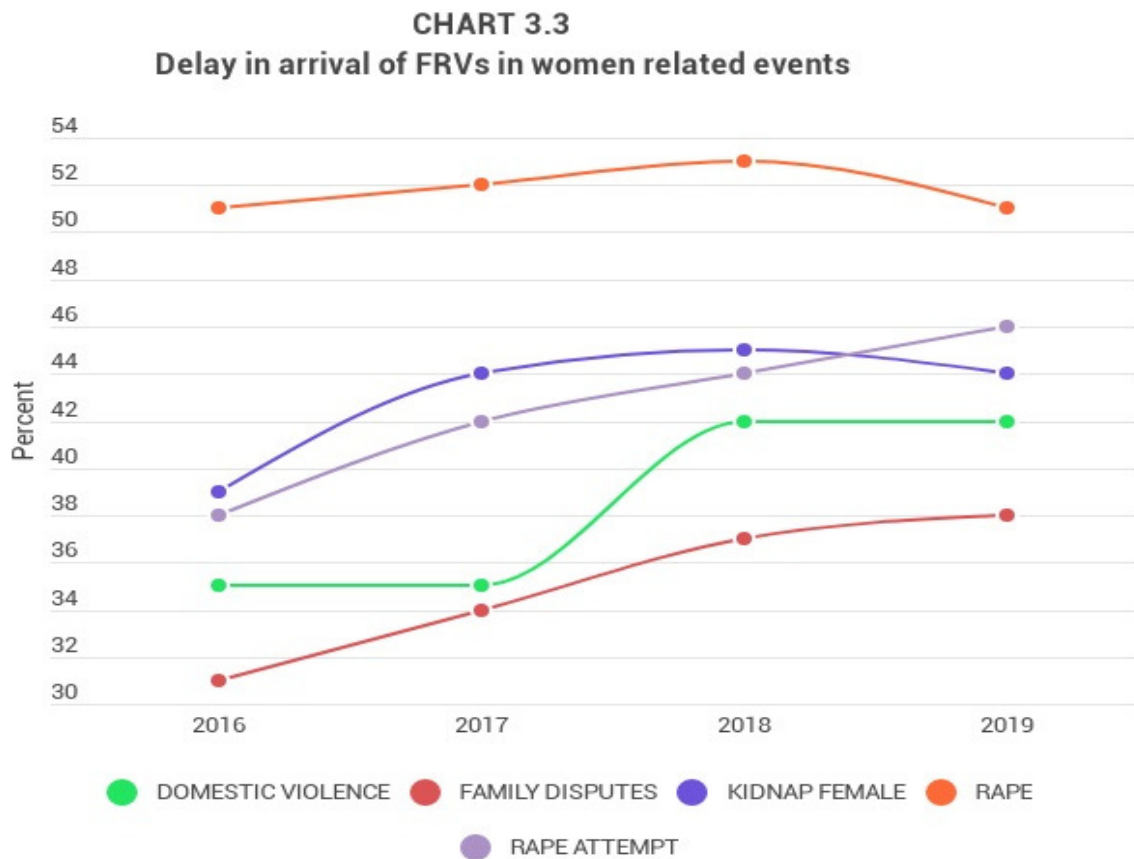
Table 3.7: Range wise delay in reaching of FRVs

Year	Total events (In lakh)	Total No. of events where delay in arrival (In nos.)		Delay in arrival (in minutes)					
				06-30	31-60	61-180	181-360	361-540	541-720
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2016	7.8	Urban	28186	22504	4646	1013	17	1	5
		Rural	9959		7347	2558	48	3	3
2017	6.1	Urban	145363	112983	24910	7291	165	12	2
		Rural	82992		58003	24302	654	27	6
2018	16.1	Urban	363630	277174	67556	18555	325	14	6
		Rural	212610		148081	63341	1155	27	6

⁸ Calculation was done in two stage: (1) the difference of valid data (excluding Null & Invalid data entries) of AR and DP for calculating delay in arrival of FRVs, and (2) the difference of valid data (excluding Null & Invalid data entries) of DP and DA for calculating position of dispatches of FRVs.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2019	17.2	Urban	395709	291265	79417	24601	414	9	3
		Rural	263784		182309	79932	1504	32	7
Total	47.2	Urban+Rural	1502233	703926	572269	221593	4282	125	38
		Urban	932888	703926	176529	51460	921	36	16
		Rural	569345	0	395740	170133	3361	89	22
Per cent		Urban+Rural	65.3	46.859	38.095	14.751	0.285	0.008	0.003
		Urban	89.3	75.457	18.923	5.516	0.099	0.004	0.002
		Rural	45.4	0.000	69.508	29.882	0.590	0.016	0.004

Source : Data provided by the Department.



We noticed that there was no improvement in the response time to distress calls over the period 2016-19. The delayed responses were not appropriately analysed for remedial actions by officers who were responsible for monitoring the operation of the system.

In reply the Government stated (August 2021) that FRV response time was dependent on multiple factors like multiple events assigned to the FRV in peak hours, high load of active events, number of events increasing significantly during festival days and caller not able to

explain the exact address of the event and road conditions in the rural areas. Therefore, responsibility of reaching on the event location on time could not be placed fully on the System Integrator. Hence penalty provision was not envisaged on this account.

We noted that the criteria of time for FRV to reach the scene—five and 30 minutes in urban and rural area respectively—were framed by the department. In the event of the wide variance, the Department must fine tune the criteria based on objective assessment of factors which affect the response time like condition of roads, traffic density, population, FRVs deployed, crime rate etc. This would ensure an effective review of the performance of the System Integrator.

We also noted that the Dial 100 model did not provide for scale up of deployment or re-deployment of FRVs on significant days— such as New Year, Holi and Diwali—when as our analysis (2019) showed, there was an upsurge of distress calls and consequent delays in arrival of FRVs (Table 3.8).

Table 3.8 :Analysis of data on significant days of the year 2019

Date	New Year			Holi				Diwali			
	Total No. of events	Delay in Dispatch	Delay in arrival of FRV	Date of March 2019	Total No. of events	Delay in dispatch	Delay in arrival of FRV	Date of Oct. 2019	Total No. of events	Delay in dispatch	Delay in arrival of FRV
29/12/2018	1771	241	554	18	2459	560	754	25	3033	666	1117
30/12/2018	2032	335	630	19	2478	547	789	26	3246	838	1171
31/12/2018	2038	350	654	20	3024	775	916	27 Diwali	3725	1056	1375
New year	2638	349	746	21 Holi	5337	2365	1493	28	5074	2040	1834
2/1/2019	2185	421	698	22	3337	1006	1113	29	4003	1271	1508
3/1/2019	1687	293	598	23	2503	552	819	30	3467	995	1369
4/1/2019	1599	290	560	24	2233	403	709	31	3129	716	1229

Source : Data provided by the Department.

During the Exit Conference (11 June 2021) the department agreed to use predictive analysis of data generated from Dial 100 system to plan better for important events such as festivals and New Year etc.

Recommendation 4:

The systemic deficiencies of Dial 100 system may be reviewed comprehensively to ensure that its objective of delivery of prompt response is achieved.