

Study on actual situations of D-Call Net by matching automatic notification data with ITARDA Macro data

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HELPNET is widely used in Japan to decrease the notification time of traffic accidents as an ACN system.(Fig. 1)

In recent years, the number of automatic notifications has dramatically increased due to the spread of vehicles equipped with D-Call Net. The authors were able to obtain notification data from three new OEMs in addition to the existing one. Therefore, we conducted a new effect study by matching the 2023 data with ITARDA macro data. This time, we focused on the fatal and serious injury rate and analyzed the actual situation.

- (1) There were 5,193 emergency calls to HELPNET in 2023, of which 2,265 required ambulance dispatch. The ambulance dispatch rate correlated with the fatal and serious injury rate. (Table 1)
- (2) The matching rate between ITARDA macro data and HELPNET emergency calls requiring ambulance dispatch was 42%. (Table 2)
- (3) A close relationship was observed between the fatal/serious injury ratio in the macro data and the fatal and serious injury rate. On the other hand, further consideration is needed regarding how to handle cases that did not match between the emergency calls to HELPNET and the macro data. (Fig. 2)

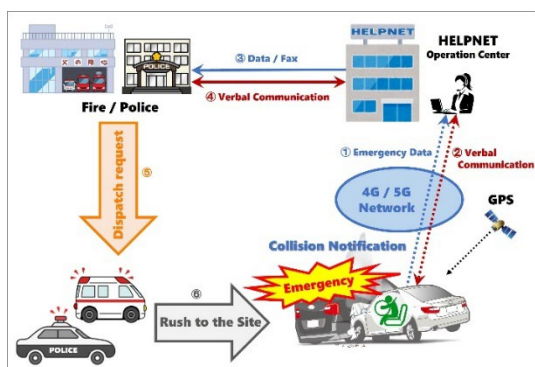


Fig.1 HELPNET outline

Table 1 Number of HELPNET calls by injury rate

injury rate	emergency calls	ambulance dispatches	dispatch rate
0-10%	3280	1215	37%
11-20%	908	484	53%
21-30%	402	214	53%
31-40%	204	105	51%
41-50%	144	78	54%
51-60%	99	53	54%
61-70%	67	47	70%
71-80%	37	25	68%
81-90%	33	27	82%
91-100%	19	17	89%
total	5193	2265	44%

Table 2 Number of ambulance dispatches by injury rate

injury rate	ambulance dispatches	match with macro data	matching rate
0-10%	1215	540	44%
11-20%	484	216	45%
21-30%	214	86	40%
31-40%	105	32	30%
41-50%	78	21	27%
51-60%	53	13	25%
61-70%	47	12	26%
71-80%	25	9	36%
81-90%	27	11	41%
91-100%	17	6	35%
total	2265	946	42%

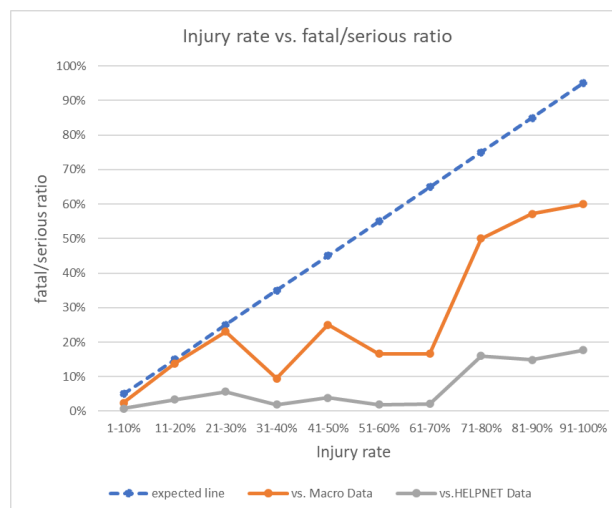


Fig.2 Injury rate vs. fatal/serious ratio of macro data