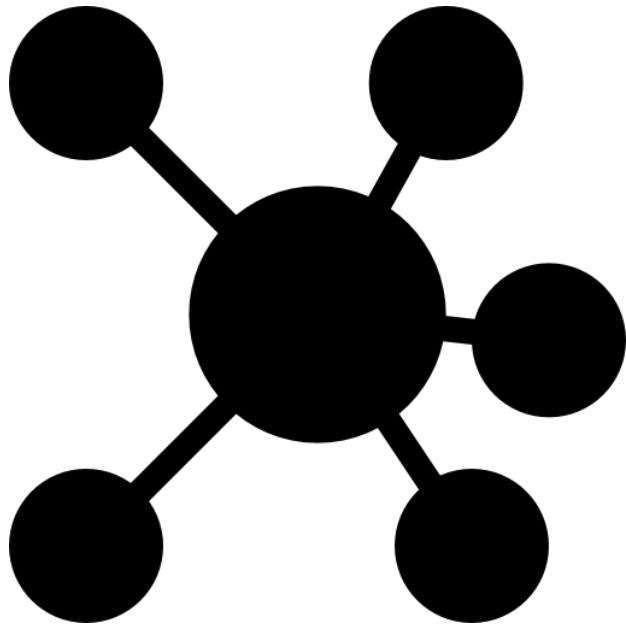


The integration of 3 data sources

Road Traffic Fatality

Data integration

Thailand



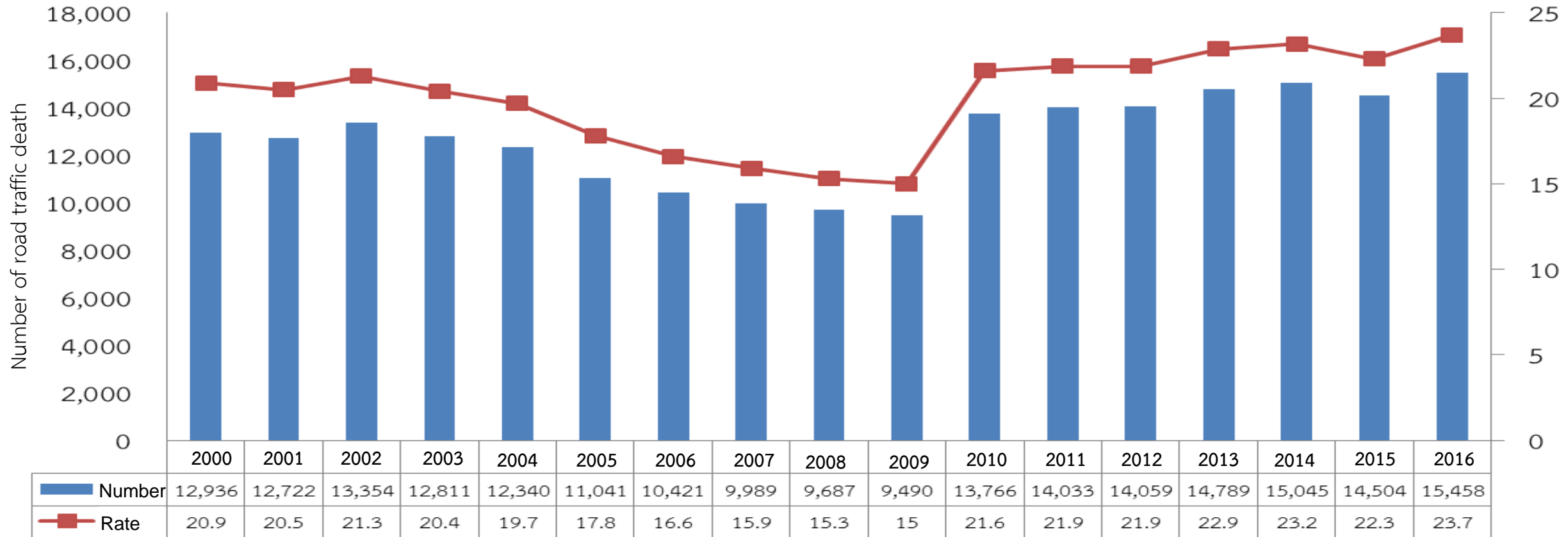
Dr.Sasithorn Tangsawat

Director, Bureau of Non-Communicable Disease

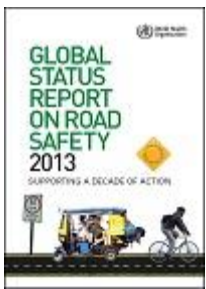


Road traffic fatality 2000 – 2016

National Vital registration



National vital registration workforce: Ministry of Interior and ministry of public health



Country/area	General Information			Road traffic deaths			
	Population numbers ^a for 2010	GNI per capita ^b for 2010 in US dollars	Income level ^c	Reported number of road traffic deaths ^d	Estimated number of road traffic deaths ^e		Estimated road traffic death rate per 100 000 population ^e
					Point estimate	95% Confidence Interval	
Thailand	69 122 232	4 150	Middle	13 365	26 312		38.1

Problem issue

road traffic accident cause of death

Ill-defined cause
of death

True
Death caused by
road traffic

Code V₀₁₋₈₉

only caused by Road Traffic

Code Y = Other

injury non specific cause

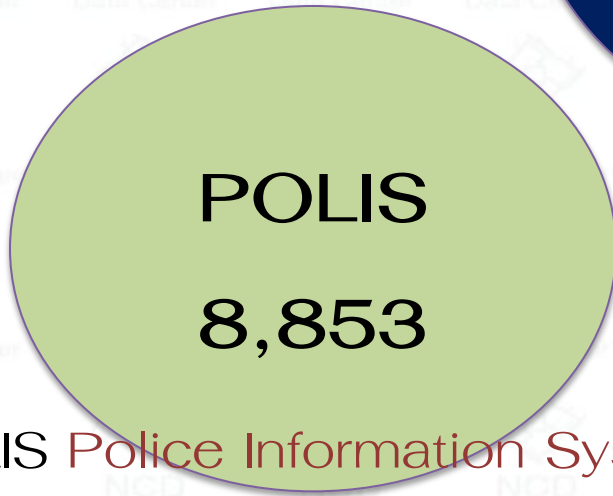
Gaps

1. Incorrect cause of death
2. Fall in ill-defined cause of death

Deaths from all causes in vital registration

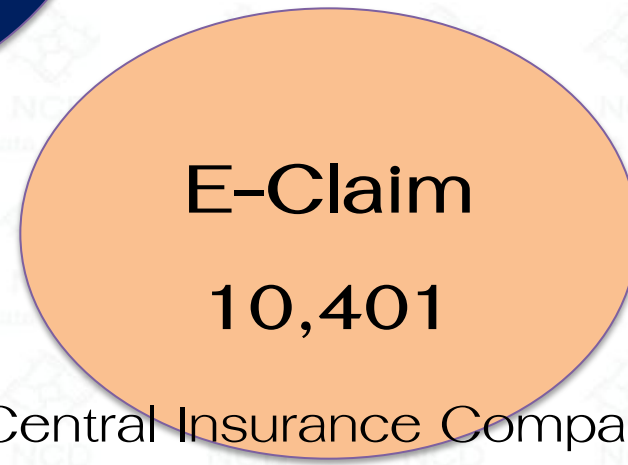
Road traffic fatality in Thailand 2011

13.37/100k pop



Dead vital registration
14,033

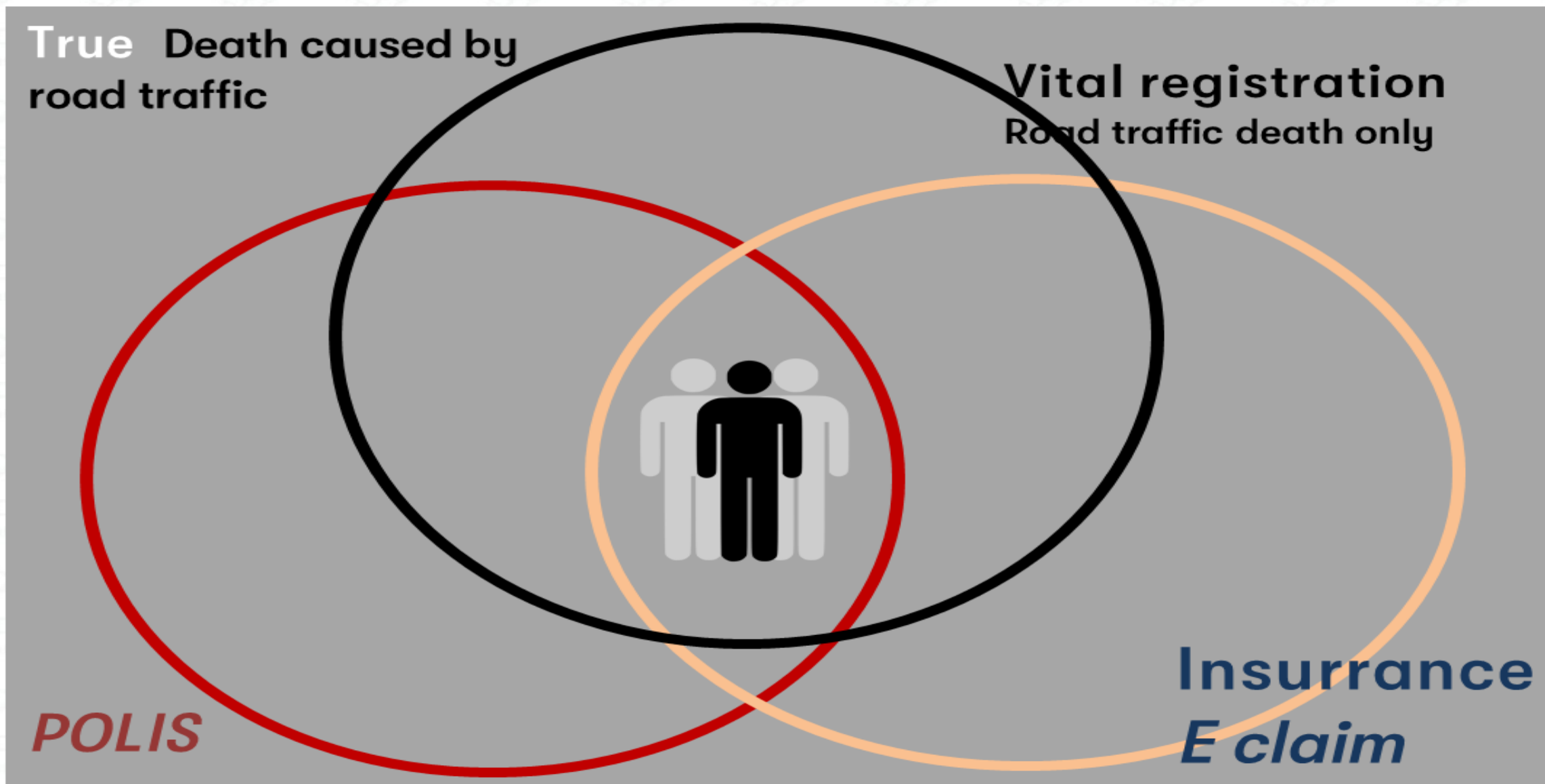
21.86 / 100k pop



15.71/100k pop



Super simple concept data integration



Final Algorithm

Case definition

database

dead case found in 1 or more

Steps

Run data union, step by step

Each matched (duplicated) cases are counted as 1 record

The matched cases are separated from the pool after each step

Algorithm of

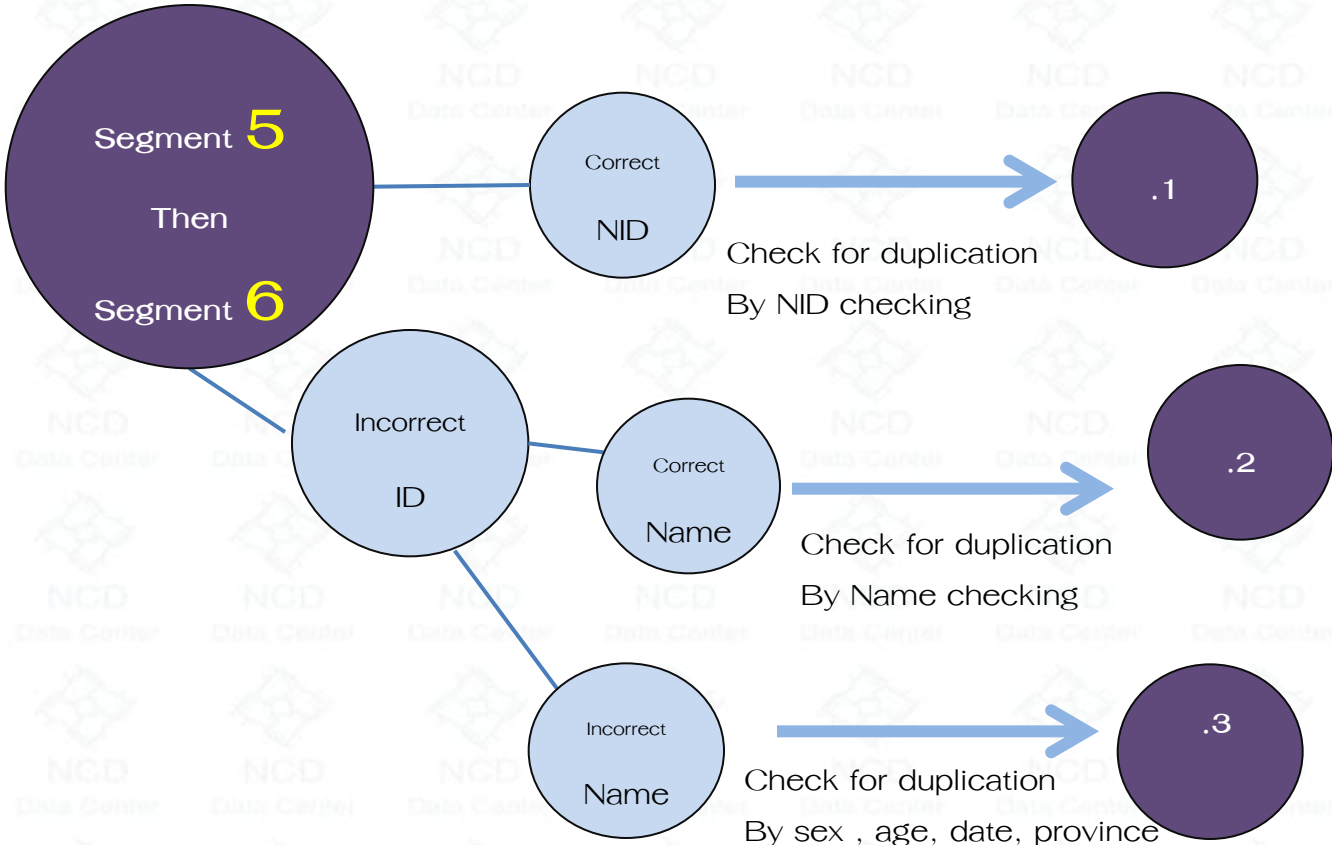
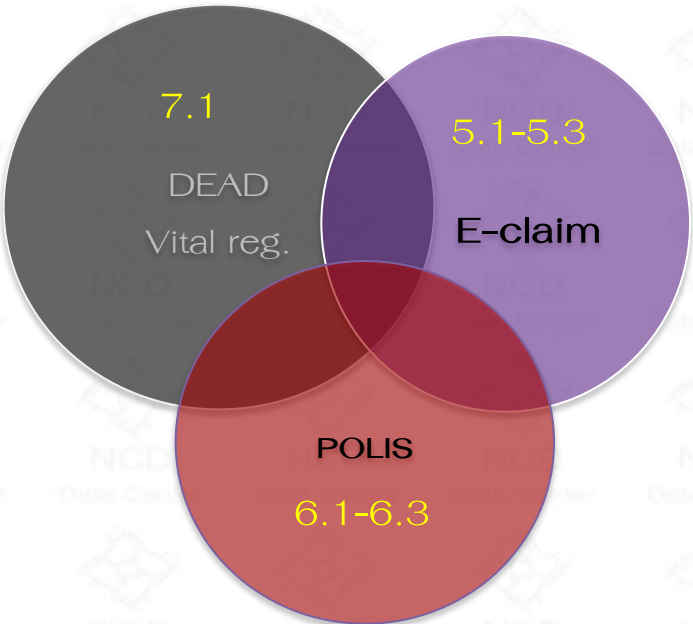
SIX

1. NID number and Date
2. Name Surname and Date and Province
3. Name Surname and Date
4. Name Surname and Province
5. NID number
6. Name Surname

Final Algorithm,, additional

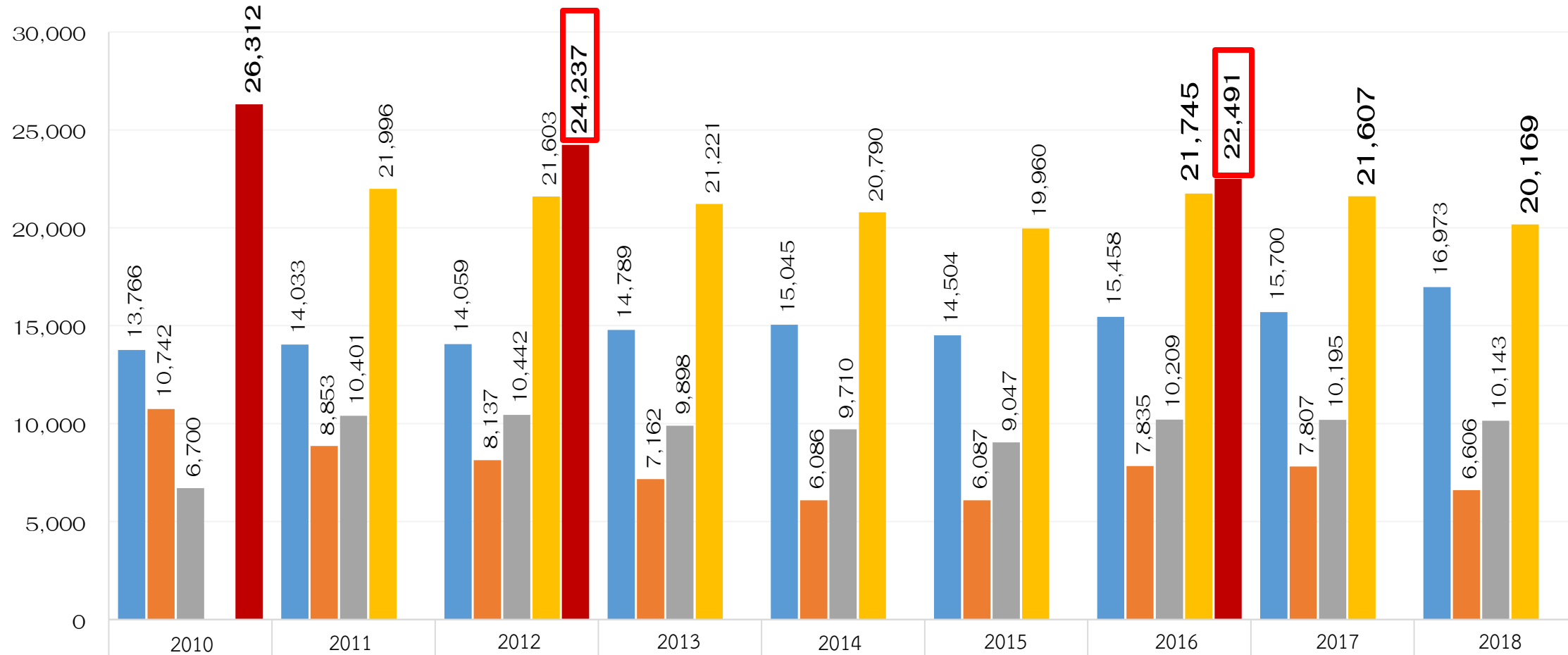
✓ No internal duplication in Vital registration

✗ Some internal duplications found in E-claim and in POLIS



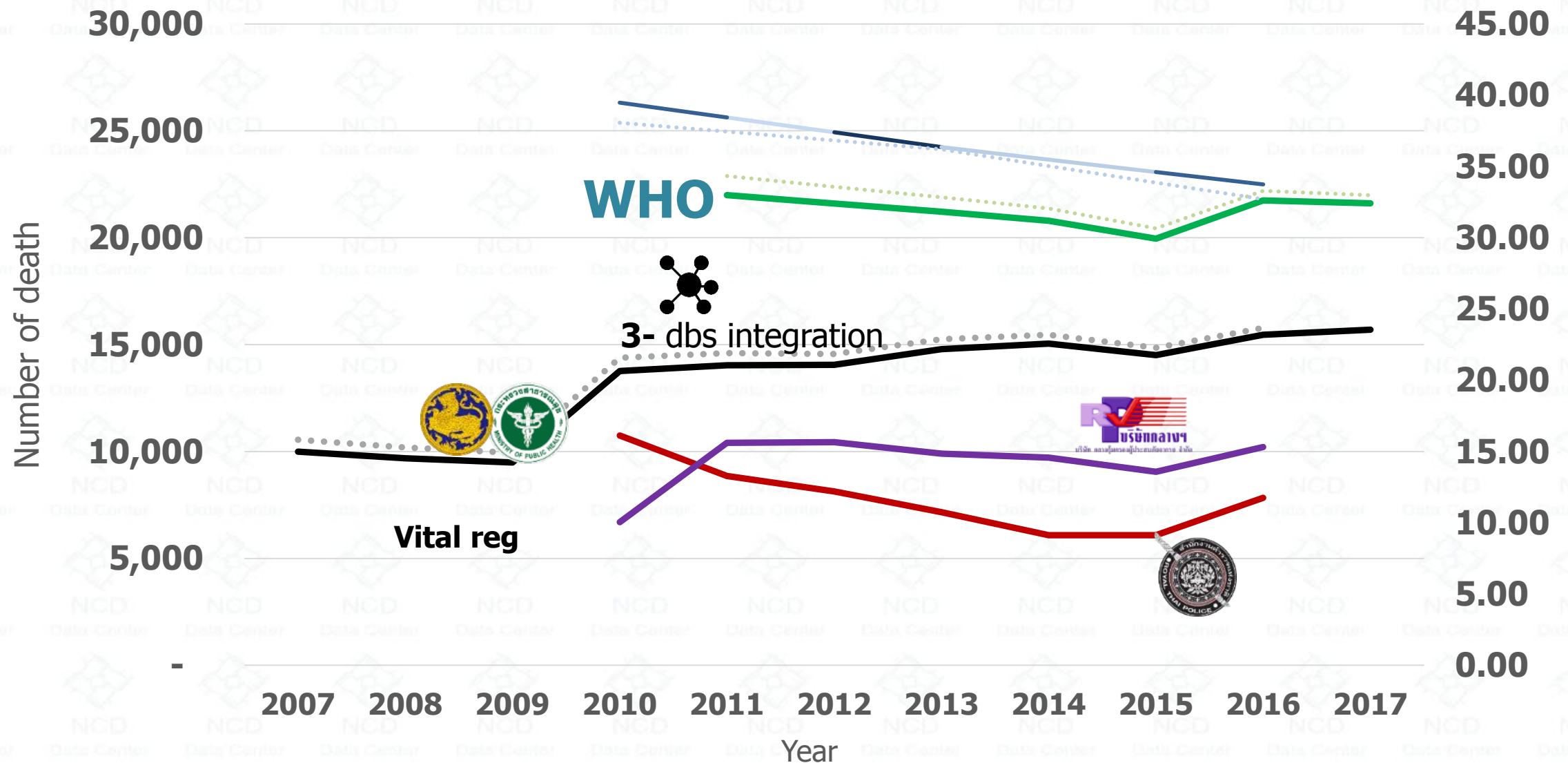
Study Result

Number of road traffic death



Dead vital reg.	13,766	14,033	14,059	14,789	15,045	14,504	15,458	15,700	16,973
POLIS	10,742	8,853	8,137	7,162	6,086	6,087	7,835	7,807	6,606
E-claim	6,700	10,401	10,442	9,898	9,710	9,047	10,209	10,195	10,143
Integration 3 sources		21,996	21,603	21,221	20,790	19,960	21,745	21,607	20,169
WHO	26,312		24,237				22,491		

Road traffic fatality (Thailand)



Online publishing @
<http://rti.ddc.moph.go.th/>

RTDDI : Road Traffic Death Data Integration

Eng. version is here

Province number of fatality

Year: 2018

Number of deaths year 2018 : 20,169 deaths

Geographic report

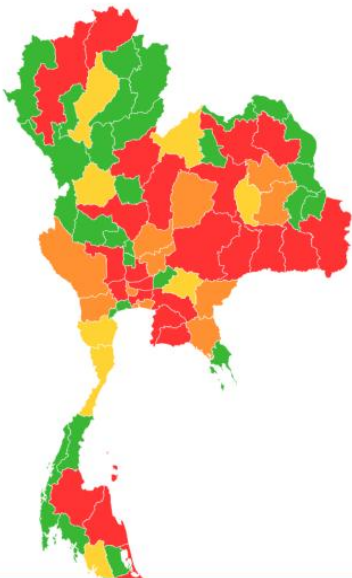
- Province number of fatality
- Fatality rate per 100,000 population by province

Statistical report

รายงานสถิติรายพื้นที่

About

User's manual



No.	Province	Value
1	Nakhon Ratchasima	976
2	Bangkok	765
3	Chon Buri	762
4	Ubon Ratchathani	584
5	Chiang Mai	569
6	Rayong	474
7	Khon Kaen	449
8	Chiang Rai	443
9	Nakhon Si Thammarat	432
10	Buri Ram	429
11	Songkhla	385
12	Udon Thani	382
13	Nakhon Pathom	376
14	Phra Nakhon Si Ayutthaya	367
15	Suphan Buri	364
16	Phitsanulok	362
17	Phetchabun	350
18	Nakhon Phanom	346

■ Very high risk : Over 318
■ High risk : 255 - 318
■ Medium risk : 191 - 255
■ Less risk : Lower 190

สำนักงานวิจัยแห่งชาติ กรมควบคุมโรค กระทรวงสาธารณสุข ถนนติวานนท์ อ.เมือง จ.นนทบุรี 11000 โทรศัพท์ 0 2590 3967, 0 2 951 0402 โทรสาร 0 2 590 3968

Data & Information on Road Traffic Injury

➤ <http://rti.ddc.moph.go.th>

➤ <http://ncd.ddc.moph.go.th>

➤ <https://public.tableau.com/profile/datacenter>

Conclusion

- Prove of data integration concept
- Very closed to WHO statistical estimation
- Getting actual dead name lists and believable number

Learnt and share

- No one wants to work more
esp. data collection and entry
- Technique is something we need
- Collaboration is more important
- Trust is very important
- Open-minded attitude is super important

COOPERATION

