

# QA the mortality rates in milestone medicare outcomes

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updated in December 2020.

- only keep partial colectomy procedure
- death rate stratify by age and case emergency status
- QA 10 patients death

## 1. Compare descriptive stats among different cohorts

### Cohort Description

- Milestone Medicare
  - 2015-2017 medicare cases by milestone graduates from 2015-2017 within 24 months after graduation
  - Partial Colectomy
- ECV
  - 2006 - 2016 medicare cases by general surgery surgeons within 35 years of practice
  - Partial Colectomy
- Medicare 2007-2017
  - Medicare 5 procedures from 2007 to 2017 standardized using R
  - Partial Colectomy

### Descriptive Stats

compare descriptive stats among different datasets

	milestone	ecv	medicare07_17
n_case	1508	551782	1066256
n_surgeon	433	14571	34846
n_hosp	440	4129	4727
n_patient	1498	470267	769080
POA_severe_cmp_rate	17%	10%	14%
death_rate	12%	8%	9%
readmit_rate	37%	30%	31%
reop_rate	5%	4%	3%

## 2. Stratify death rate by patient age

age_grp	cohort	death_rate	n_case	n_surgeon	n_hosp	n_patient	complication	readmit_rate	reop_r
65-80	milestone	9.8%	1040	376	380	1032	16.0%	31%	5.5%
65-80	ecv	5.6%	387391	14214	3955	328637	9.1%	23%	3.695%
65-80	medicare	6.5%	727185	32816	4443	522619	12.3%	24%	3.16%
81-99	milestone	16.2%	468	257	260	466	18.6%	51%	3.8%
81-99	ecv	12.8%	164328	12874	3655	142233	13.2%	45%	3.229%
81-99	medicare	14.1%	339071	27660	4234	248113	16.5%	45%	2.60%
NA	ecv	42.9%	63	61	61	63	26.8%	57%	3.175%

81-99 age group had higher 30 day's mortality rates.

## 3. Stratify death rate by case emergency

emergent	cohort	death_rate	n_case	n_surgeon	n_hosp	n_patient	complication	readmit_rate	reop
0	milestone	3%	577	252	243	576	6.8%	24.1%	3.3%
0	ecv	3.0%	335193	13102	3778	283708	4.4%	21.5%	2.9%
0	medicare	3.4%	616812	29106	4354	442312	6.2%	23%	2.2%
1	milestone	17%	920	372	374	913	23.2%	45.9%	6.0%
1	ecv	15.1%	215286	13712	3619	190955	19.6%	42.5%	4.6%
1	medicare	16.4%	446078	30151	4031	336836	23.7%	43%	4.0%
NA	milestone	45%	11	10	10	11	9.1%	27.3%	9.1%
NA	ecv	13.9%	1303	645	364	1107	17.7%	30.9%	6.6%
NA	medicare	21.7%	3366	1742	624	2450	26.7%	33%	9.1%

Emergent cases had higher 30 days mortality rates.

## 4. check 10 patients death manually

- step1: find 10 different cases that death =1
- step2: extract facility claim ID for the cases
- step3: find facility claim in original MedPAR using facility claim ID
- step4: find the status at discharge. BENE\_DSCHRG\_STUS\_CD

BENE_ID	discharge_loc
0e3a8502f3c01bf9341124e09ff634de80303748	Discharged alive
0fae731d047e75ebde860e61e7114d1255e21f0e	Discharged dead
8ea4bb955ccefc46f72e3b770f71b0f2d380353	Discharged dead
c92e3bff0606108b789a4ba2ad62ab6dd3beca6	Discharged alive
f2ab3dbb70ce1fc39761a95c40eb38cb7a72660c	Discharged dead
24f949d93bf2e141653cc5391894541a57c783ef	Discharged alive
b2e098c1c0f58c7d4d1d66733c99f7fcdffa0913	Discharged dead
79065a946ccd9b71f12060857a1b43f65d0e1762	Discharged dead
403bdce166bbc790f6a02d27e5250f10019658ae	Discharged dead

6 out of 9 patients were dead at hospital discharge.