

Kansas November General Election Turnout 2020-11-03

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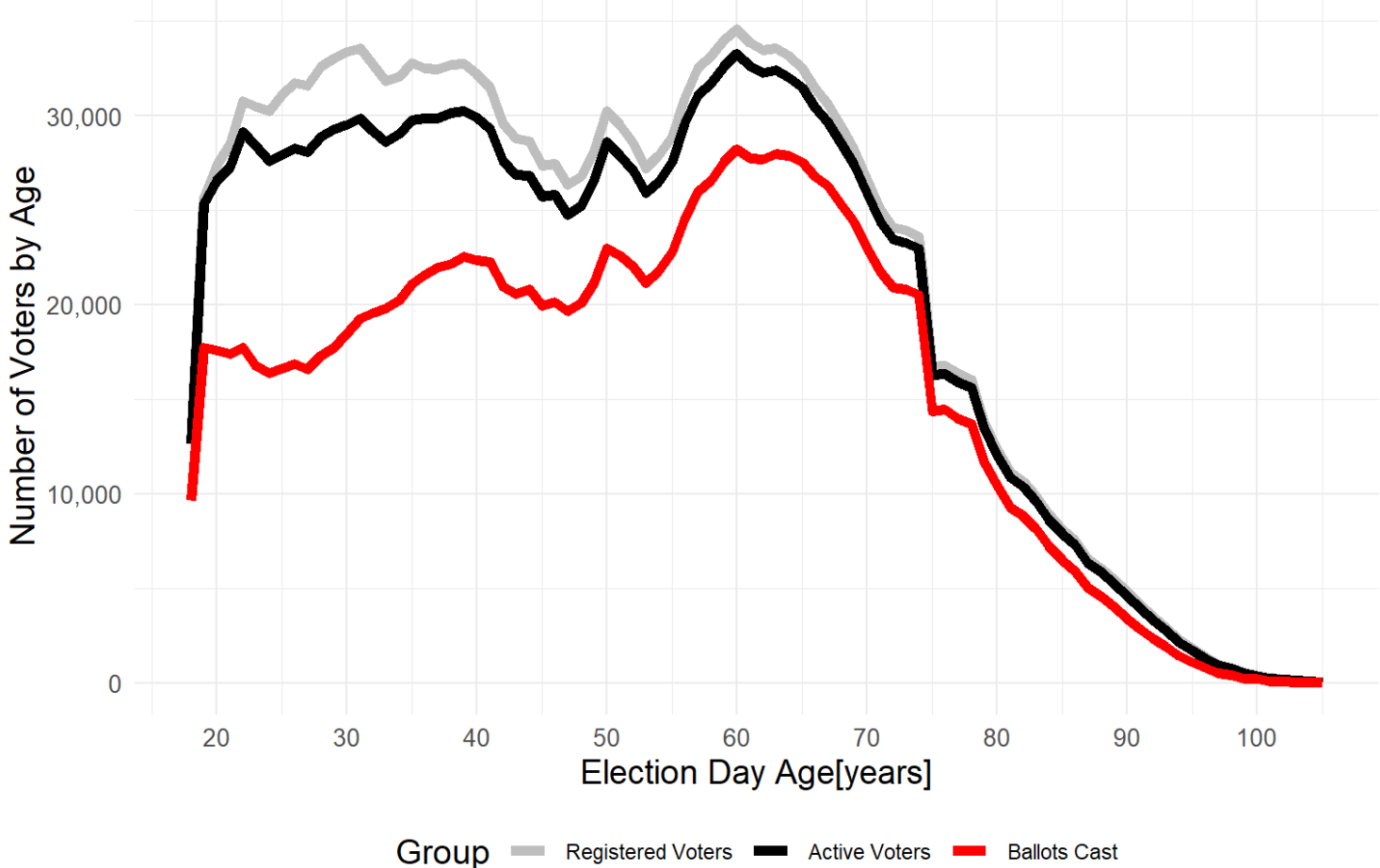
2022-04-30

Outline

- Registered Voters, Active Voters, Ballots Cast
- Percentages of Registered Voters
- Normalized Voter Fraction (Turnout)
- Kansas Statewide Turnout vs 105 Counties
- Party Differences
- Gender Differences
- County-Precinct Differences: JO, SG, SN, WY, DG, ..., Counties

Registered Voters, Active Voters, Ballots Cast

Kansas General Election 2020-11-03: Voters by Age - Kansas Statewide
 1,897,481 Registered Voters; 1,787,645 Active Voters; 1,381,516 Ballots Cast

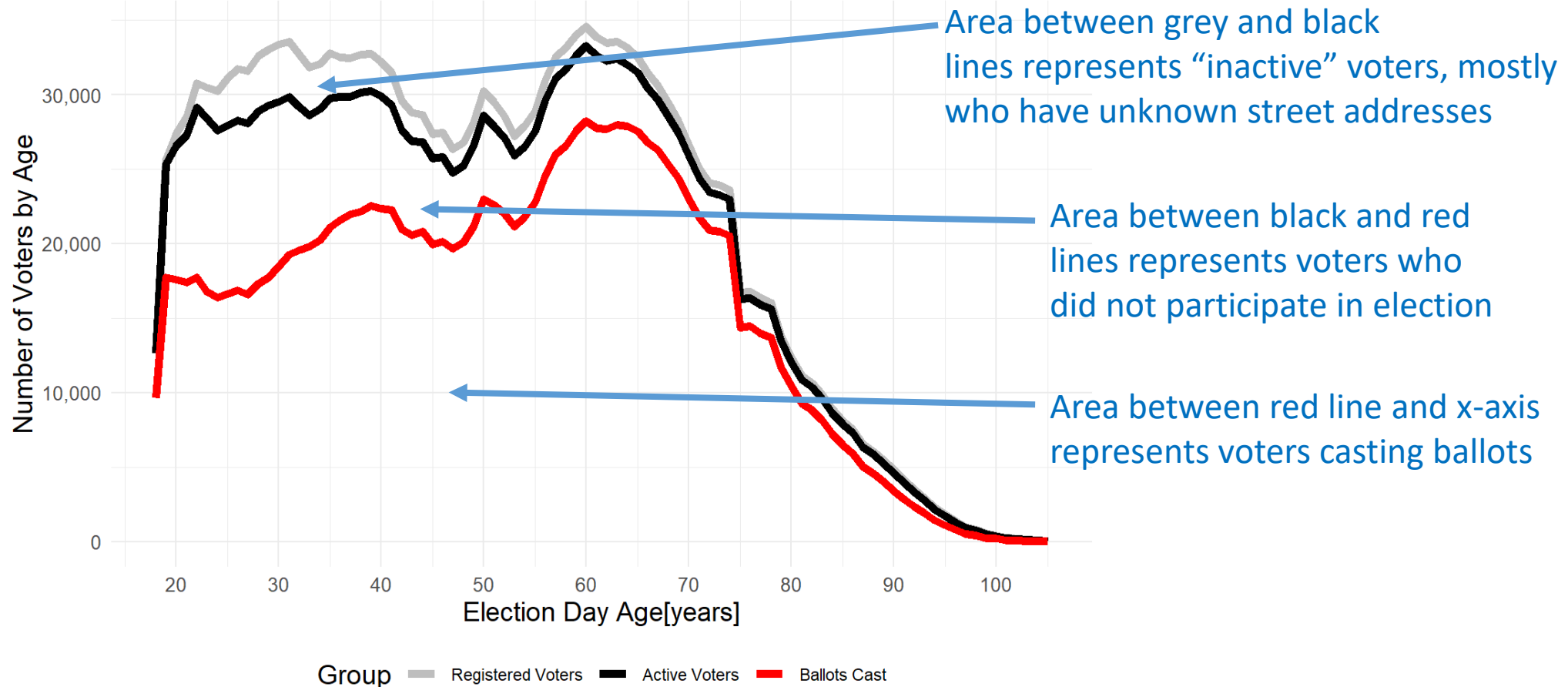


Age	Registered Voters	Active Voters	Ballots Cast
18	12,708	12,635	9,630
19	25,671	25,336	17,758
20	27,380	26,529	17,610
21	28,516	27,291	17,395
22	30,756	29,133	17,736
23	30,512	28,397	16,797
24	30,269	27,613	16,409
25	31,115	27,916	16,617
26	31,758	28,291	16,873
27	31,596	28,094	16,594
28	32,597	28,892	17,295
29	33,039	29,305	17,718
30	33,356	29,512	18,474
...			
99	565	504	242
100	425	387	213
101	279	233	102
102	188	159	63
103	137	118	34
104	65	55	12
105	51	42	13
TOTAL	1,897,481	1,787,645	1,381,516

Registered Voters, Active Voters, Ballots Cast

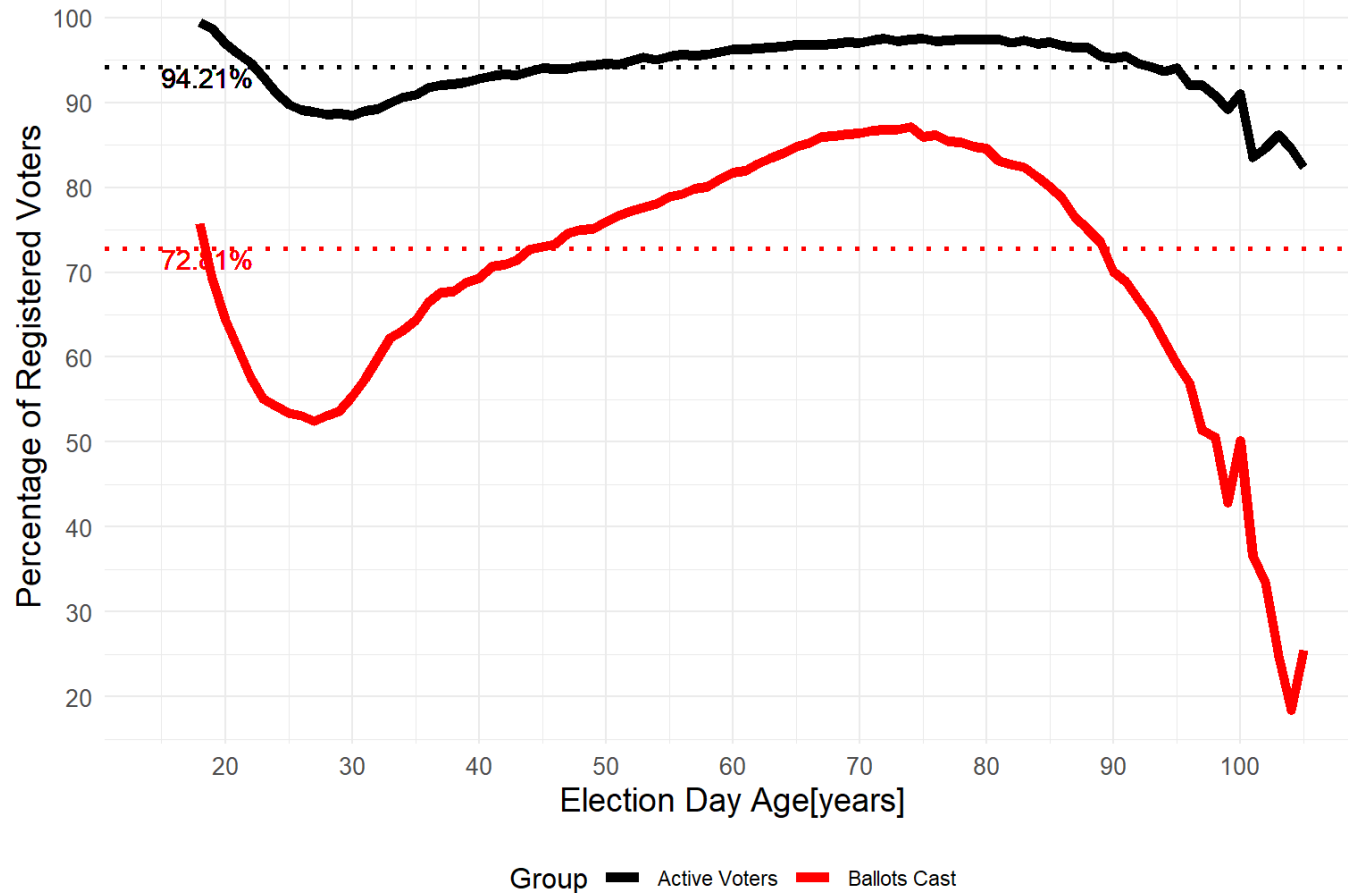
Kansas General Election 2020-11-03: Voters by Age - Kansas Statewide

1,897,481 Registered Voters; 1,787,645 Active Voters; 1,381,516 Ballots Cast



Percentages: Active Voters, Voters Casting Ballots

Kansas General Election 2020-11-03: Percent of Registered Voters - Kansas Statewide

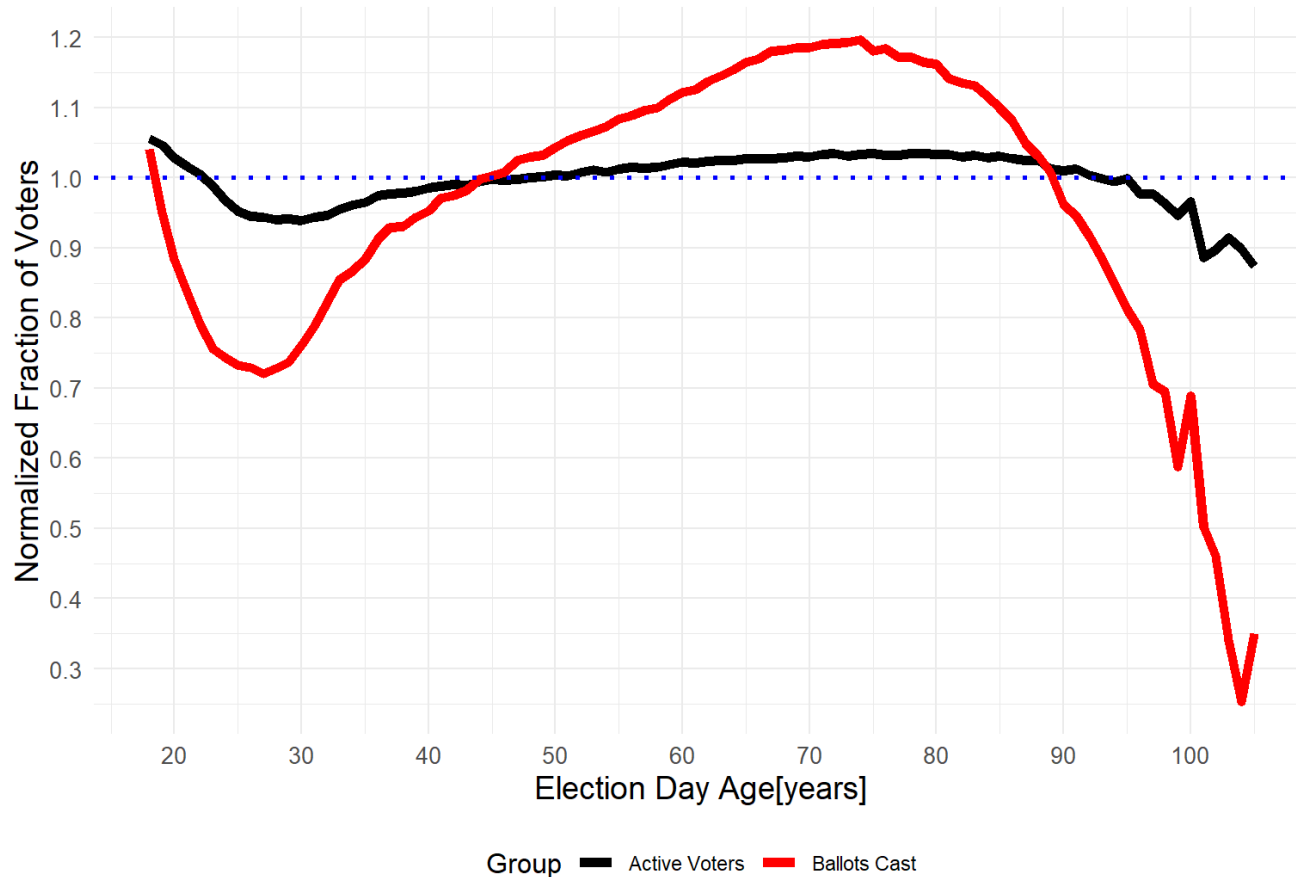


Age	Registered Voters	Active Voters	Ballots Cast	% Active	% Ballots Cast
18	12,708	12,635	9,630	99.43%	75.78%
19	25,671	25,336	17,758	98.70%	69.18%
20	27,380	26,529	17,610	96.89%	64.32%
21	28,516	27,291	17,395	95.70%	61.00%
22	30,756	29,133	17,736	94.72%	57.67%
23	30,512	28,397	16,797	93.07%	55.05%
24	30,269	27,613	16,409	91.23%	54.21%
25	31,115	27,916	16,617	89.72%	53.41%
26	31,758	28,291	16,873	89.08%	53.13%
27	31,596	28,094	16,594	88.92%	52.52%
28	32,597	28,892	17,295	88.63%	53.06%
29	33,039	29,305	17,718	88.70%	53.63%
30	33,356	29,512	18,474	88.48%	55.38%
...					
99	565	504	242	89.20%	42.83%
100	425	387	213	91.06%	50.12%
101	279	233	102	83.51%	36.56%
102	188	159	63	84.57%	33.51%
103	137	118	34	86.13%	24.82%
104	65	55	12	84.62%	18.46%
105	51	42	13	82.35%	25.49%
TOTAL	1,897,481	1,787,645	1,381,516	94.21%	72.81%

Source: Kansas Secretary of State, Voter File 2021-02-05

Normalized Voter Fraction (Turnout)

Kansas General Election 2020-11-03: Normalized Voter Fraction - Kansas Statewide



For each age interval, 18 to 105 years:

$$\text{Normalized Fraction Active} = \frac{\frac{\text{Active voters}}{\text{Registered voters}}}{\text{Overall Active Fraction}}$$

$$\text{Normalized Fraction Voted} = \frac{\frac{\text{Nov 2020 voters}}{\text{Registered voters}}}{\text{Overall Voted Fraction}}$$

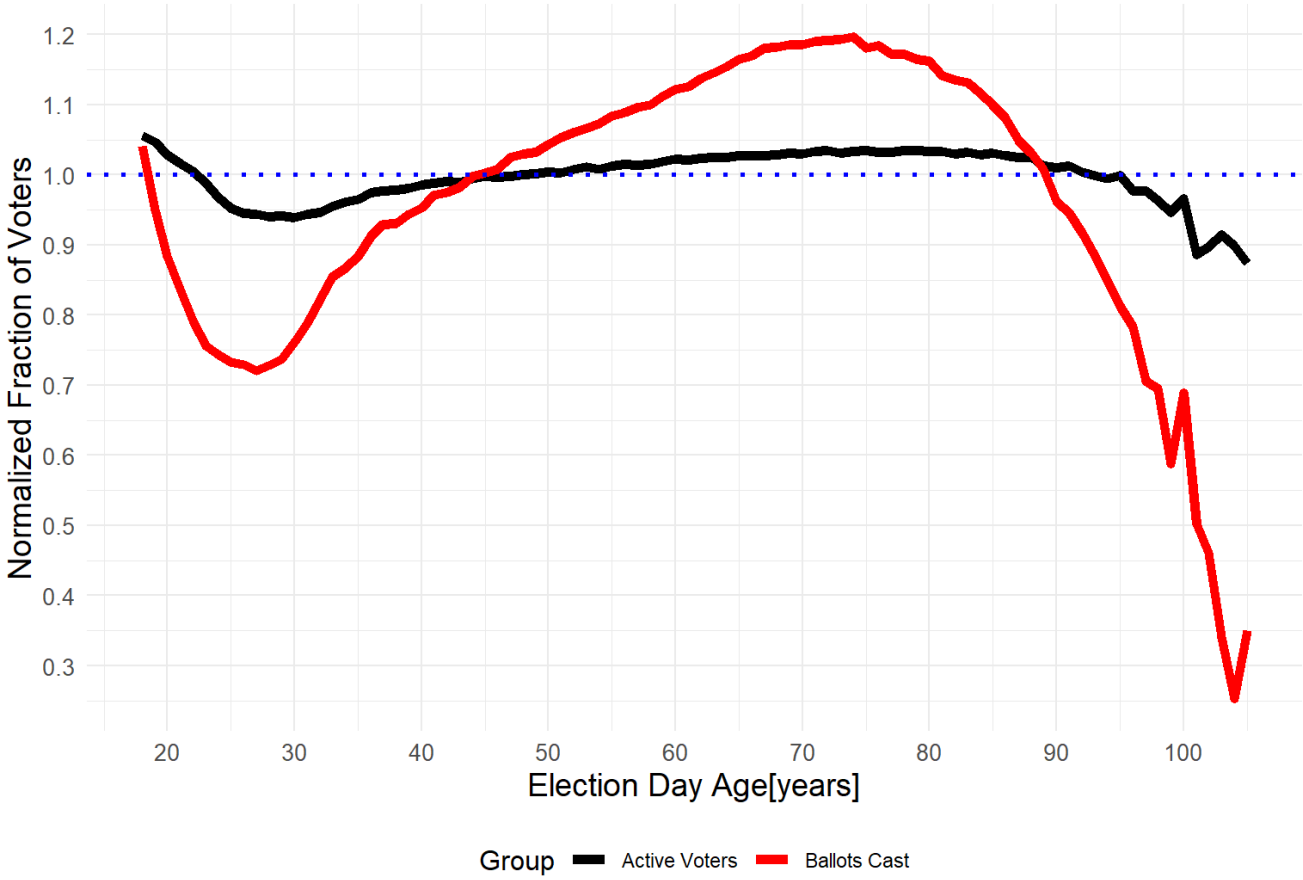
where

$$\text{Overall Active Fraction} = \frac{\sum_{age} \text{Active voters}}{\sum_{age} \text{Registered voters}}$$

$$\text{Overall Voted Fraction} = \frac{\sum_{age} \text{Nov 2020 voters}}{\sum_{age} \text{Registered voters}}$$

Normalized Voter Fraction (Turnout)

Kansas General Election 2020-11-03: Normalized Voter Fraction - Kansas Statewide



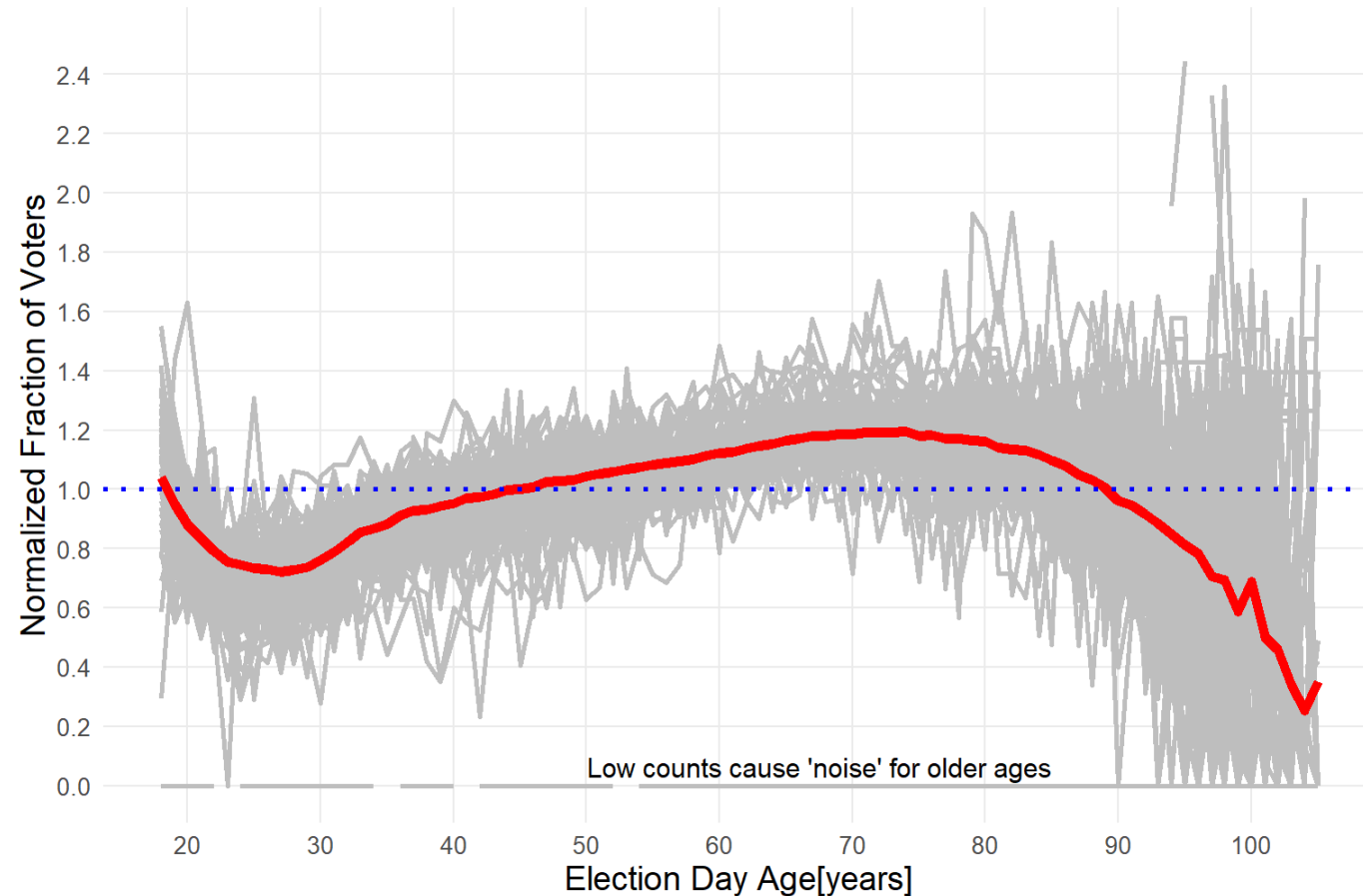
Age	% Active	% Ballots Cast	Active Normalized	Ballots Normalized
18	99.43%	75.78%	1.055	1.041
19	98.70%	69.18%	1.048	0.950
20	96.89%	64.32%	1.028	0.883
21	95.70%	61.00%	1.016	0.838
22	94.72%	57.67%	1.005	0.792
23	93.07%	55.05%	0.988	0.756
24	91.23%	54.21%	0.968	0.745
25	89.72%	53.41%	0.952	0.734
26	89.08%	53.13%	0.946	0.730
27	88.92%	52.52%	0.944	0.721
28	88.63%	53.06%	0.941	0.729
29	88.70%	53.63%	0.941	0.737
30	88.48%	55.38%	0.939	0.761
...				
99	89.20%	42.83%	0.947	0.588
100	91.06%	50.12%	0.967	0.688
101	83.51%	36.56%	0.886	0.502
102	84.57%	33.51%	0.898	0.460
103	86.13%	24.82%	0.914	0.341
104	84.62%	18.46%	0.898	0.254
105	82.35%	25.49%	0.874	0.350
TOTAL	94.21%	72.81%	1.000	1.000

Source: Kansas Secretary of State, Voter File 2021-02-05

Normalized Turnout: Kansas vs 105 Counties

Turnout curves can vary considerably across counties in the state.

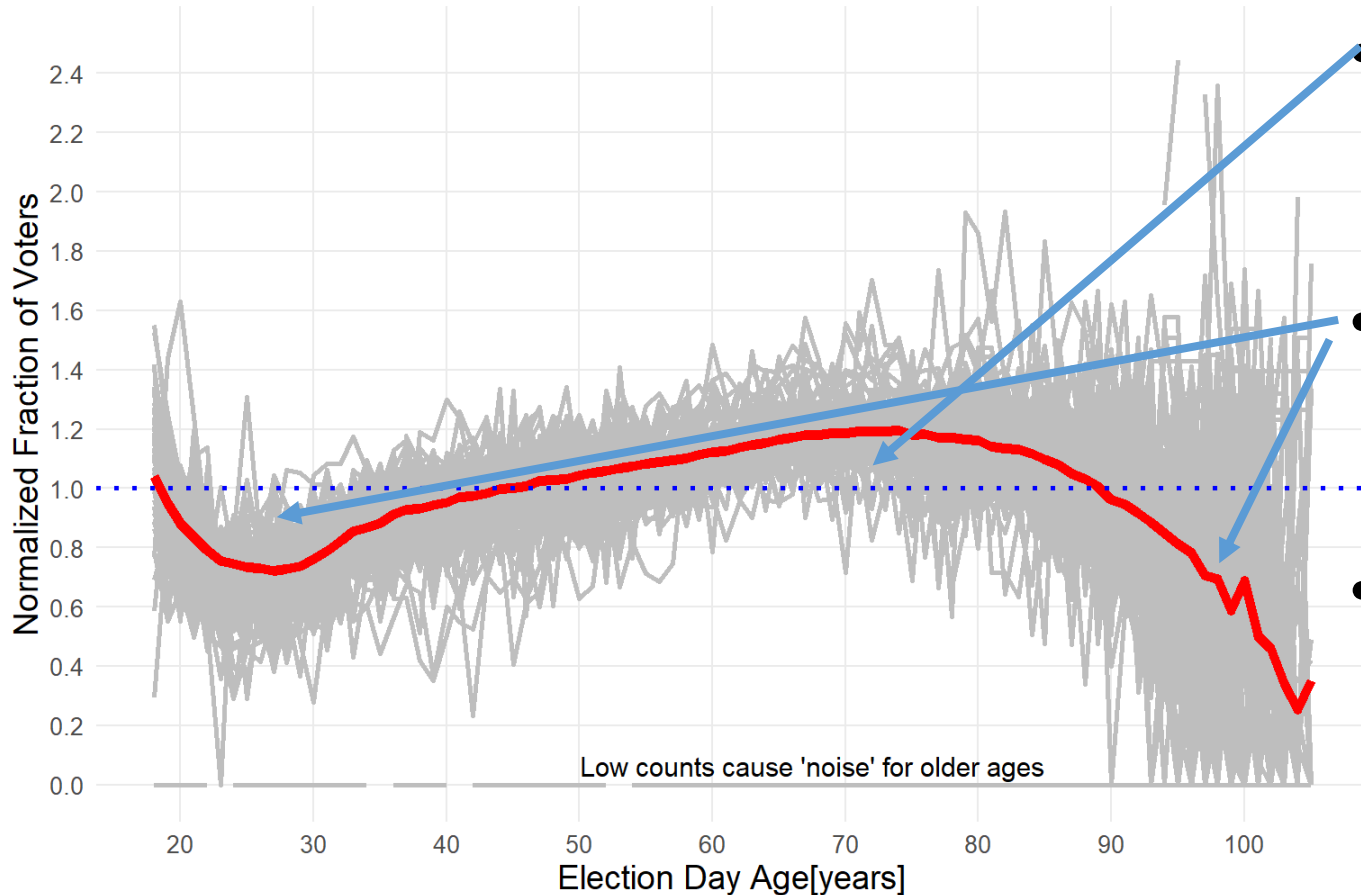
Kansas General Election 2020-11-03: Normalized Voter Fraction by Age
Kansas Statewide = red line; 105 Counties = grey lines;



Advantages of Normalized Turnout

Kansas General Election 2020-11-03: Normalized Voter Fraction by Age

Kansas Statewide = red line; 105 Counties = grey lines;

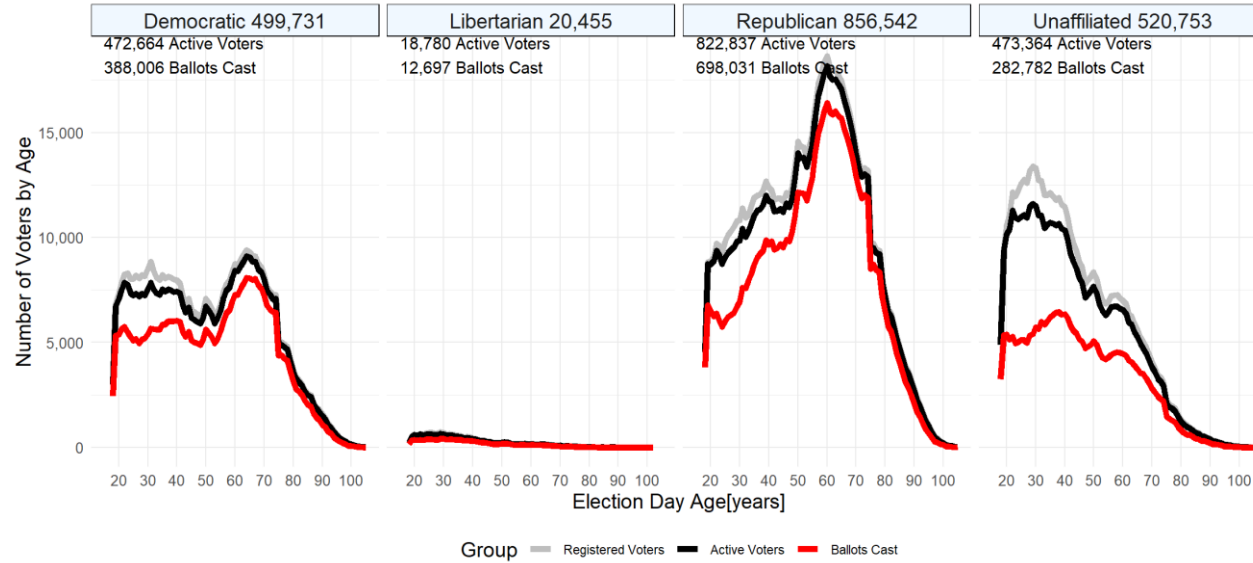


- Ratios > 1 show age ranges with turnout better than overall, e.g., 45 - 89
- Ratios < 1 show age ranges with turnout worse than overall, ≤ 44 or ≥ 90
- Turnout curves can be compared among state and counties, or other districts, especially using “heatmaps”

Party Differences

Nov 2020

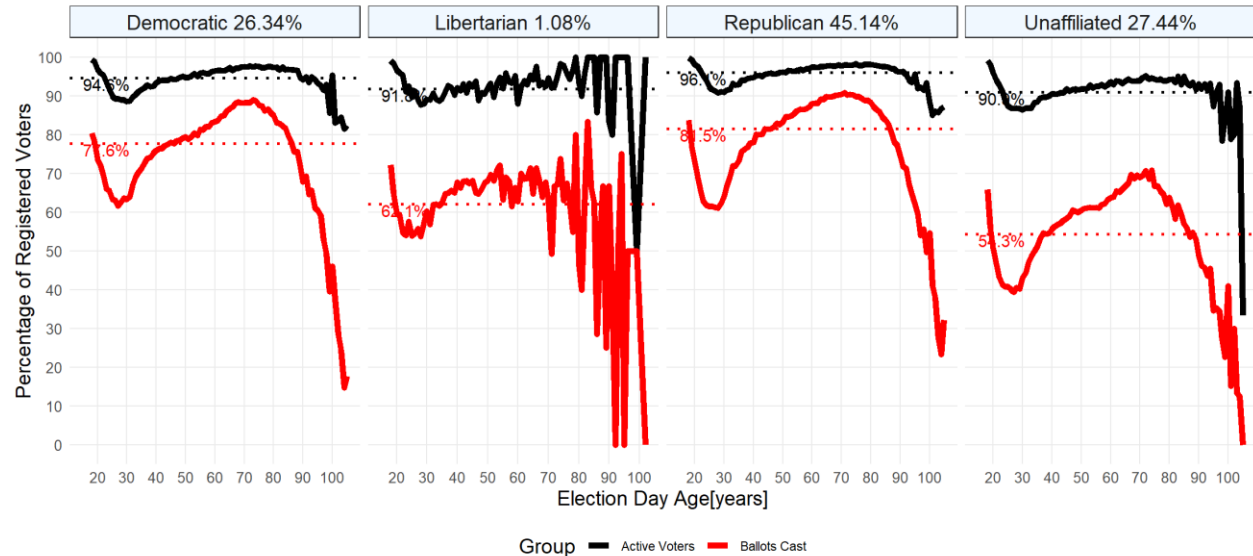
Kansas General Election 2020-11-03: Voters by Party and Age - Kansas Statewide



Source: Kansas Secretary of State, Voter File 2021-02-05

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Kansas General Election 2020-11-03: Percentage of Registered Voters by Party and Age - Kansas Statewide



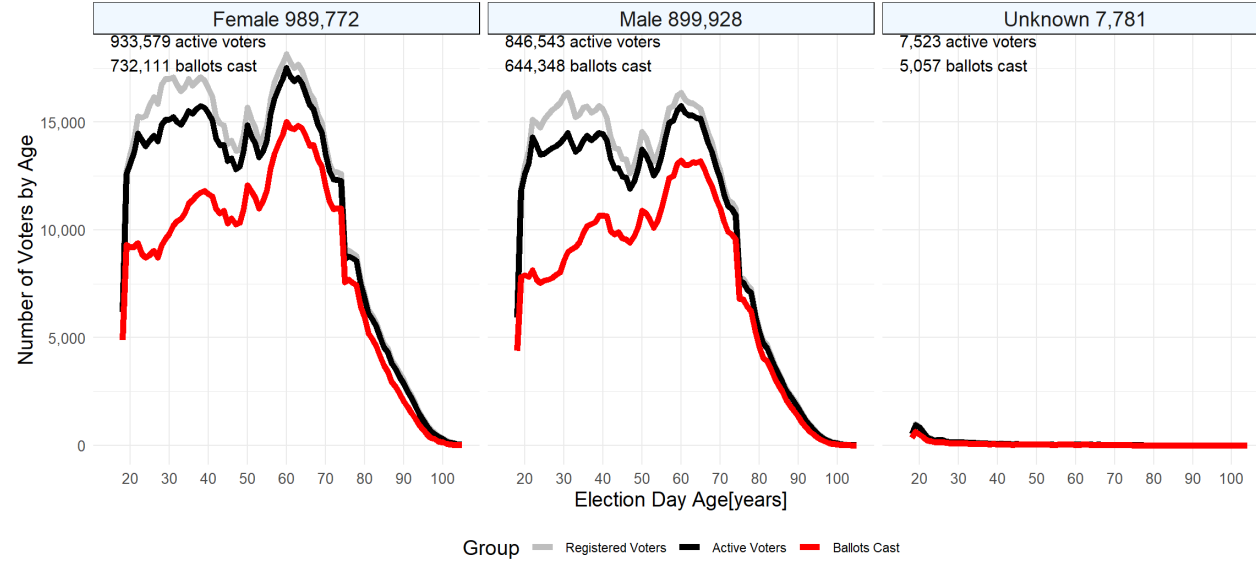
Source: Kansas Secretary of State, Voter File 2021-02-05

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Gender Differences

Nov 2020

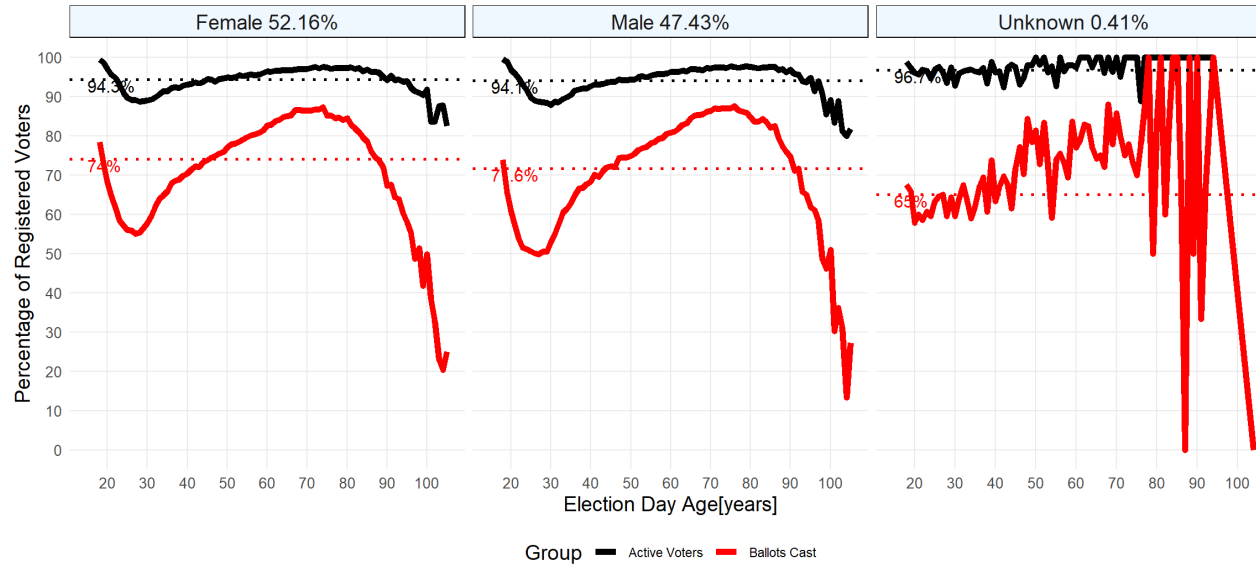
Kansas General Election 2020-11-03: By Gender and Age - Kansas Statewide



Source: Kansas Secretary of State, Voter File 2021-02-05

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Kansas General Election 2020-11-03: Percentage By Gender and Age - Kansas Statewide



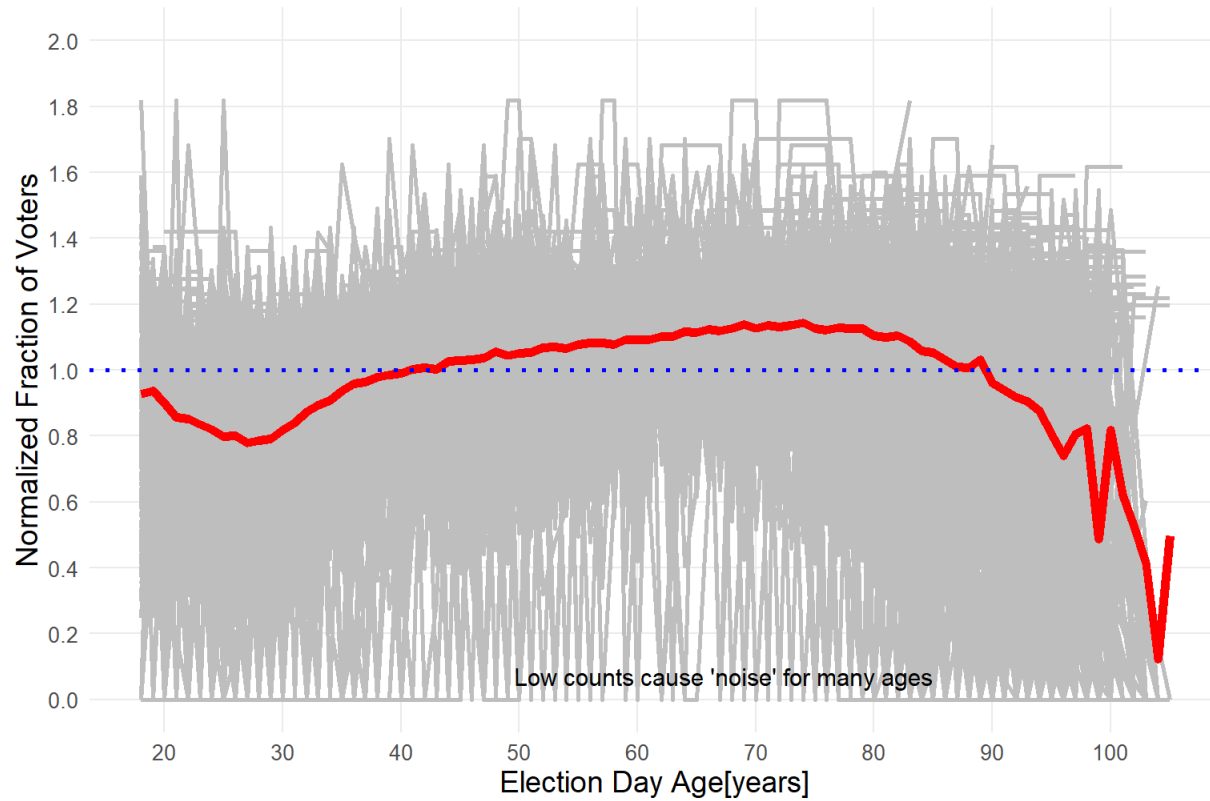
Source: Kansas Secretary of State, Voter File 2021-02-05

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Normalized Turnout: Johnson County vs Precincts

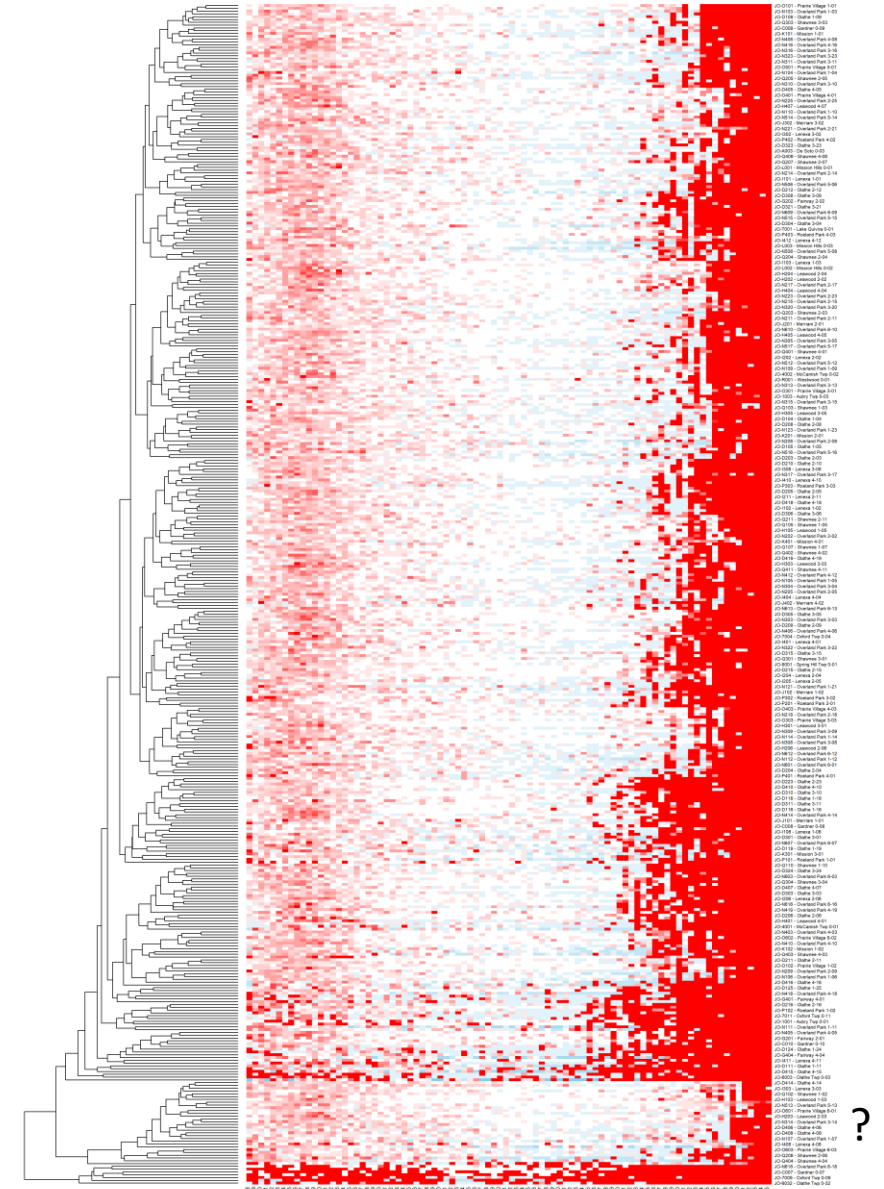
Turnout curves can vary considerably by precincts within a county.

Kansas General Election 2020-11-03: Normalized Voter Faction by Age
Johnson County = red line; 422 Precincts = grey lines;

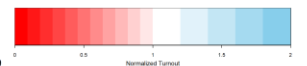


Source: Kansas Secretary of State, Voter File 2021-02-05

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Source: Kansas Secretary of State, Voter File 2021-02-05 - efg 2022-04-28 0109

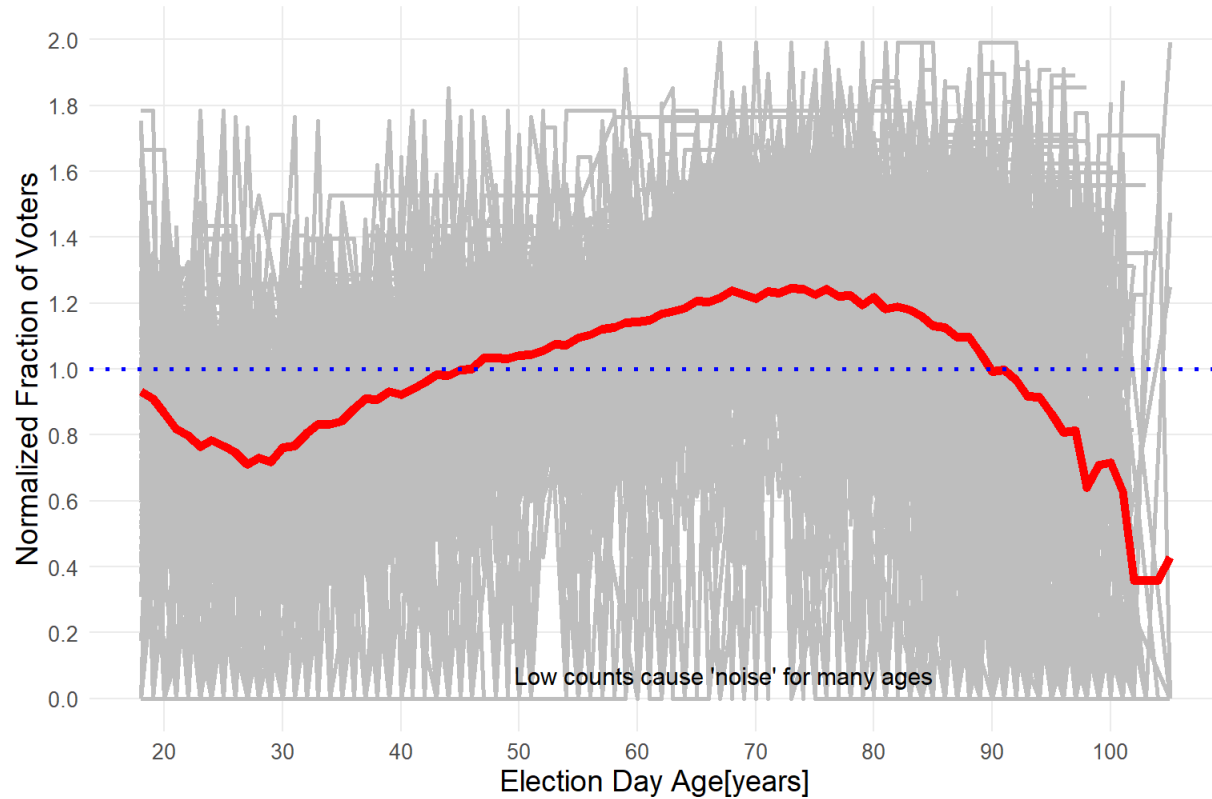


Normalized Turnout: Sedgwick County vs Precincts

Turnout curves can vary considerably by precincts within a county.

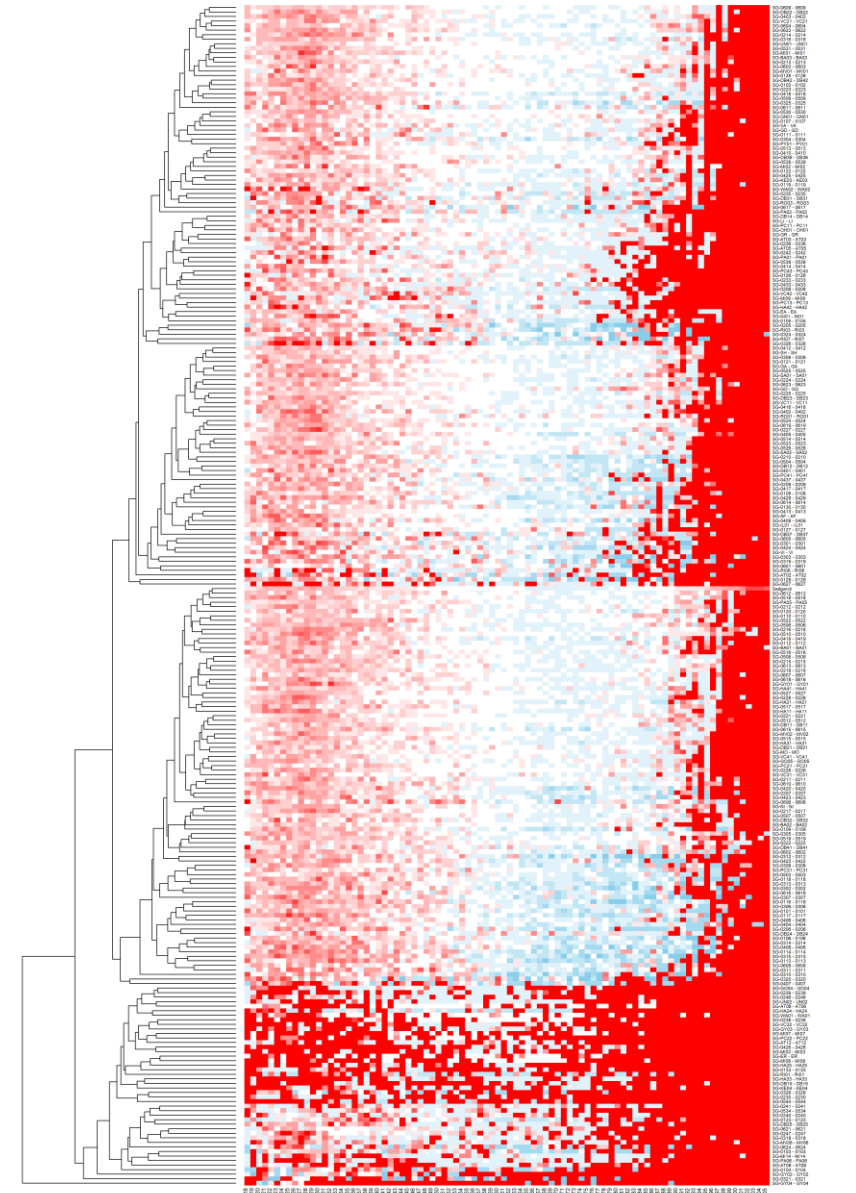
Kansas General Election 2020-11-03: Normalized Voter Faction by Age

Sedgwick County = red line; 259 Precincts = grey lines;



Source: Kansas Secretary of State, Voter File 2021-02-05

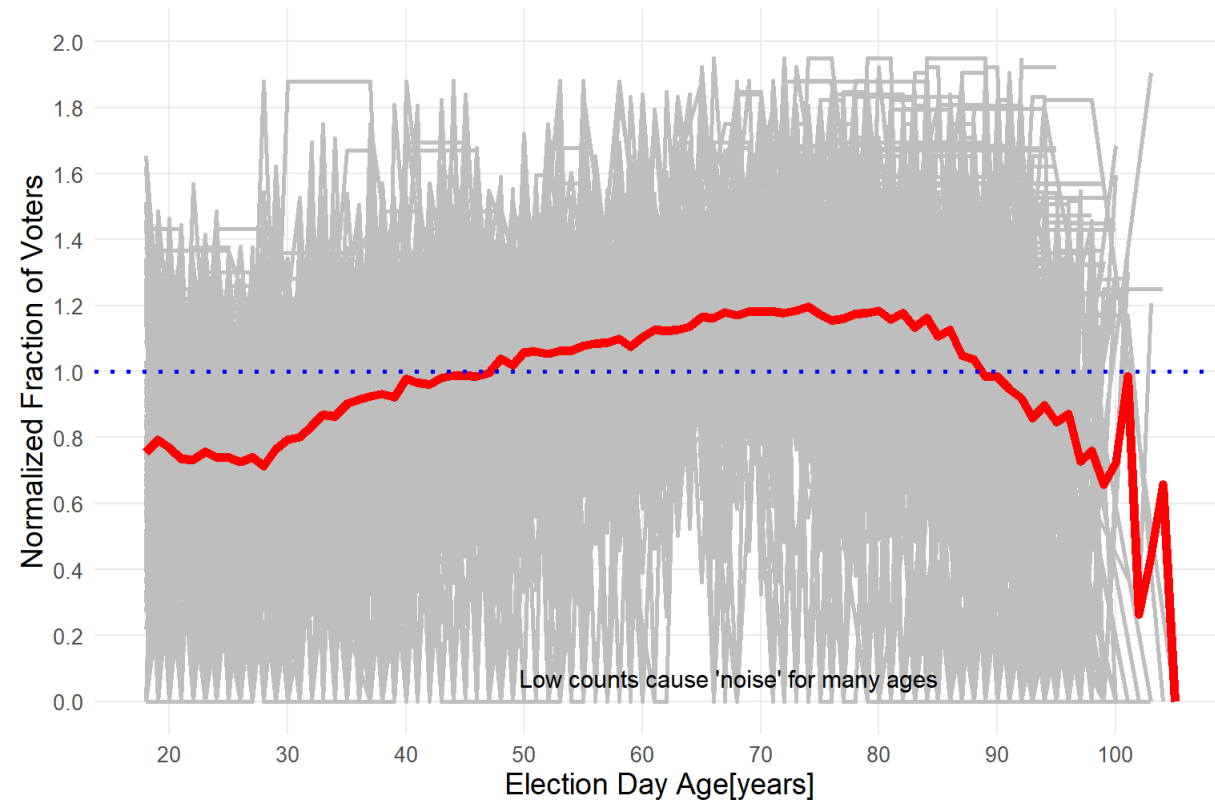
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Normalized Turnout: Shawnee County vs Precincts

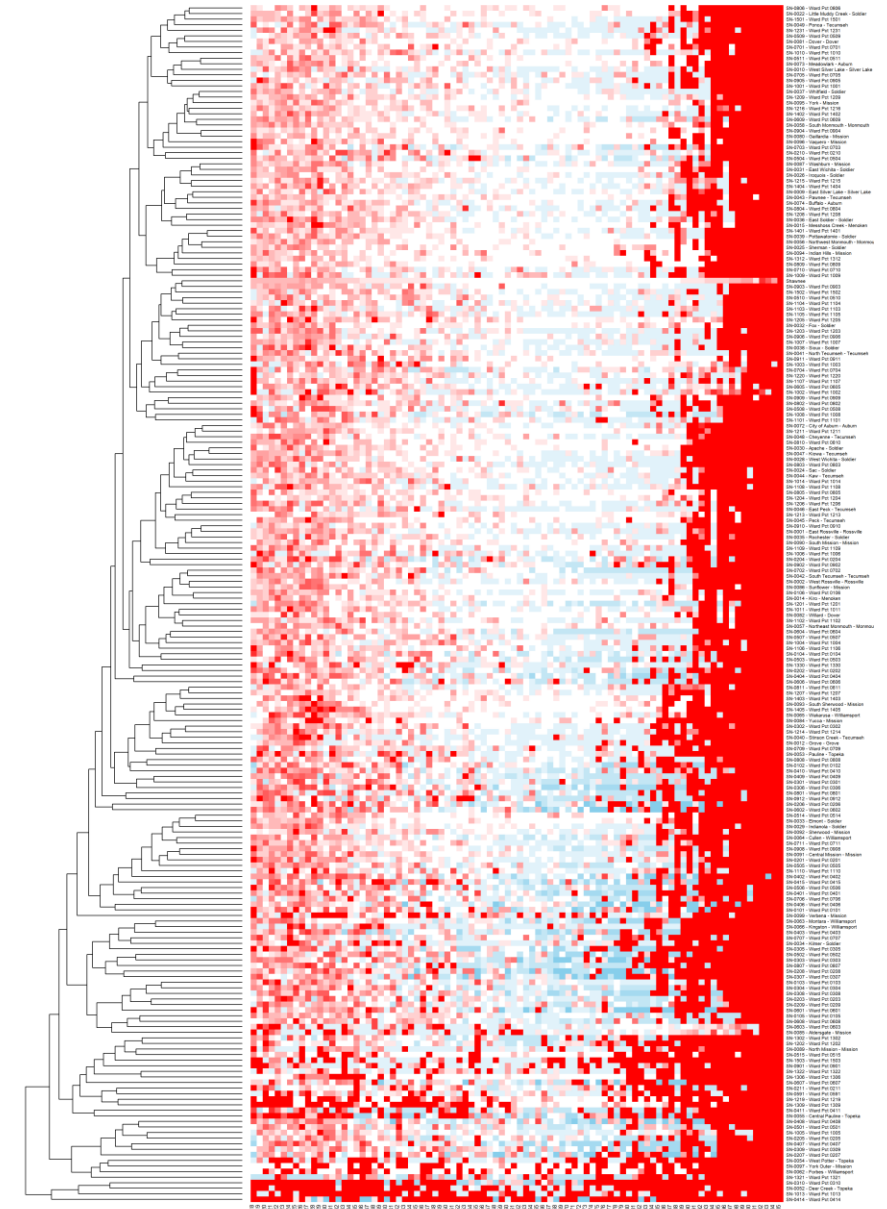
Turnout curves can vary considerably by precincts within a county.

Kansas General Election 2020-11-03: Normalized Voter Faction by Age
Shawnee County = red line; 214 Precincts = grey lines;

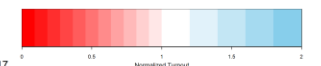


Source: Kansas Secretary of State, Voter File 2021-02-05

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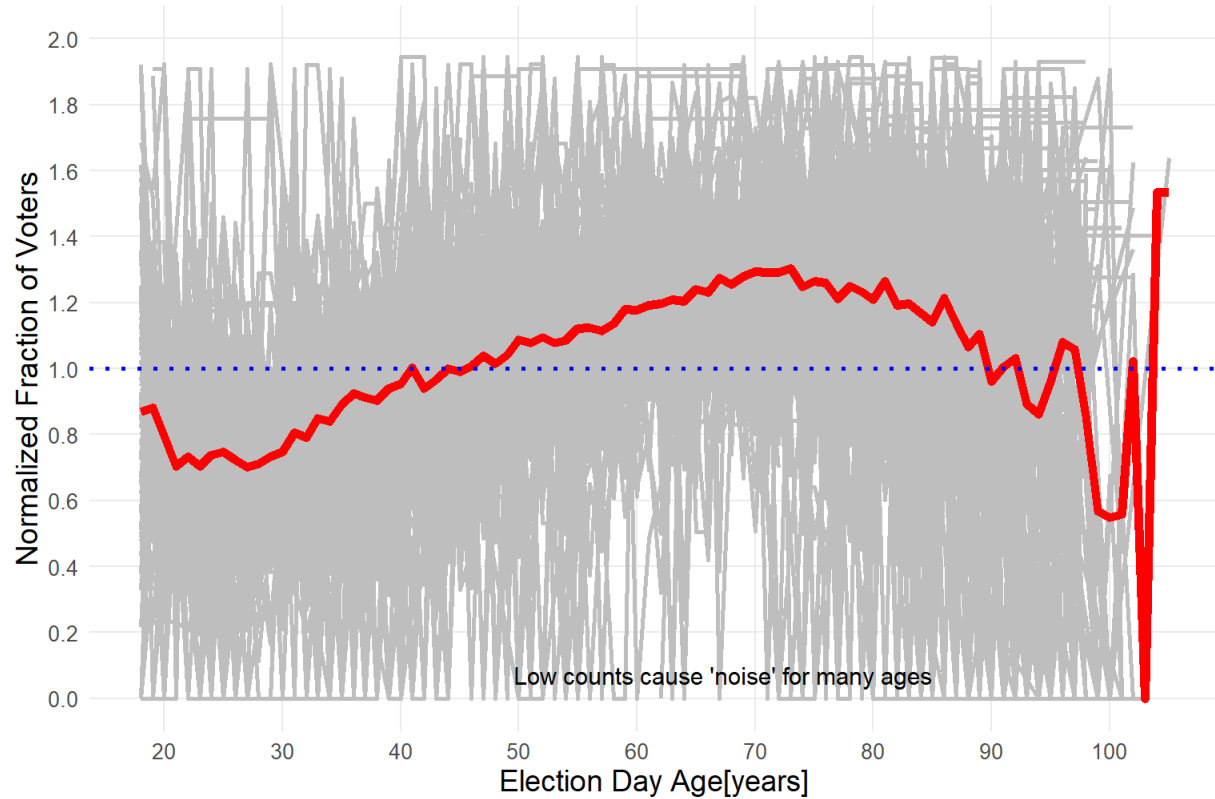
Source: Kansas Secretary of State, Voter File 2021-02-05 - efg 2022-04-28 0117



Normalized Turnout: Wyandotte County vs Precincts

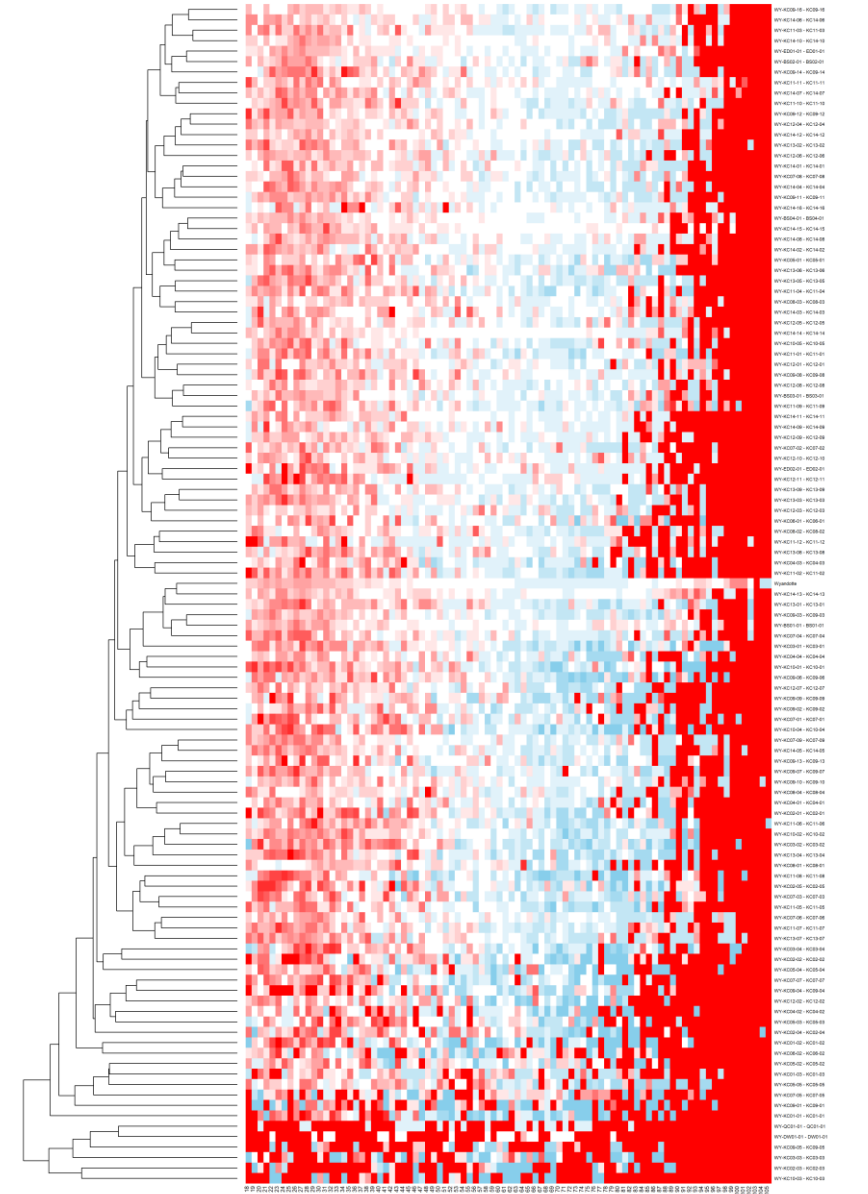
Turnout curves can vary considerably by precincts within a county.

Kansas General Election 2020-11-03: Normalized Voter Faction by Age
Wyandotte County = red line; 112 Precincts = grey lines;

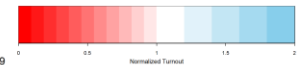


Source: Kansas Secretary of State, Voter File 2021-02-05

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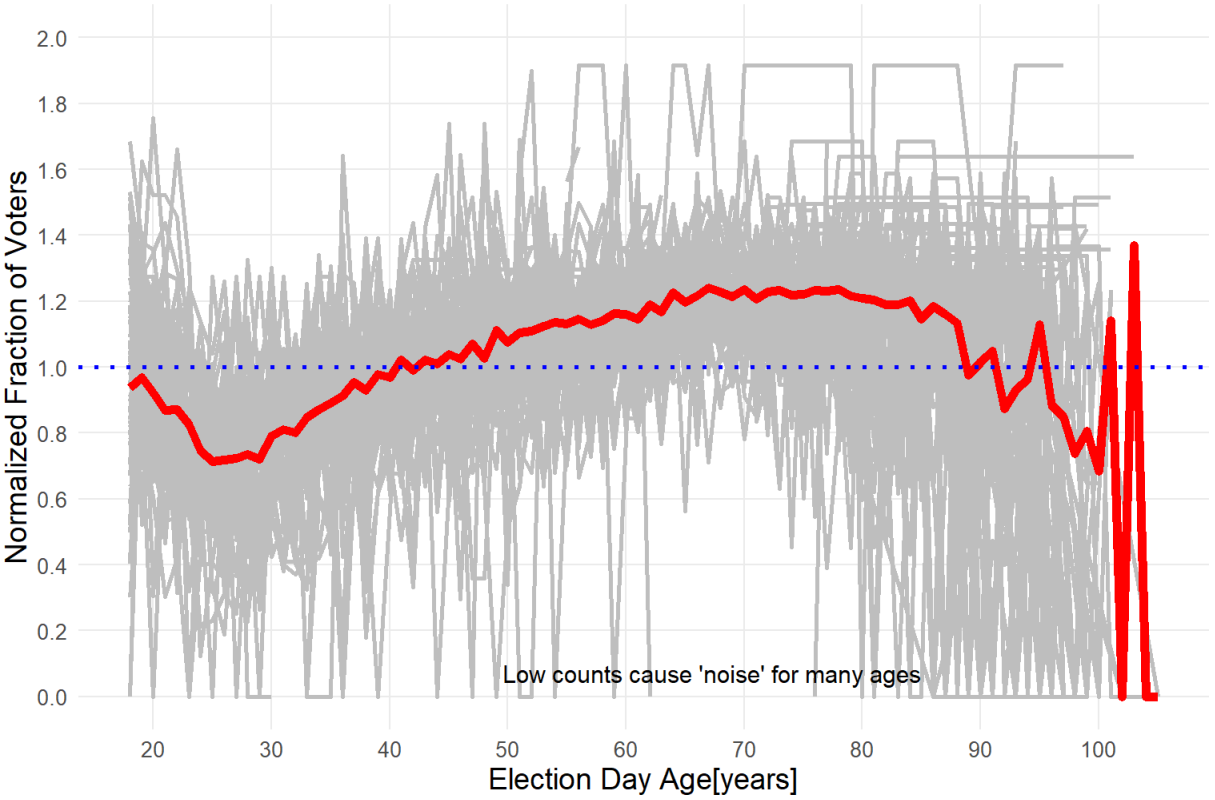
Source: Kansas Secretary of State, Voter File 2021-02-05 - efg 2022-04-28 0119



Normalized Turnout: Douglas County vs Precincts

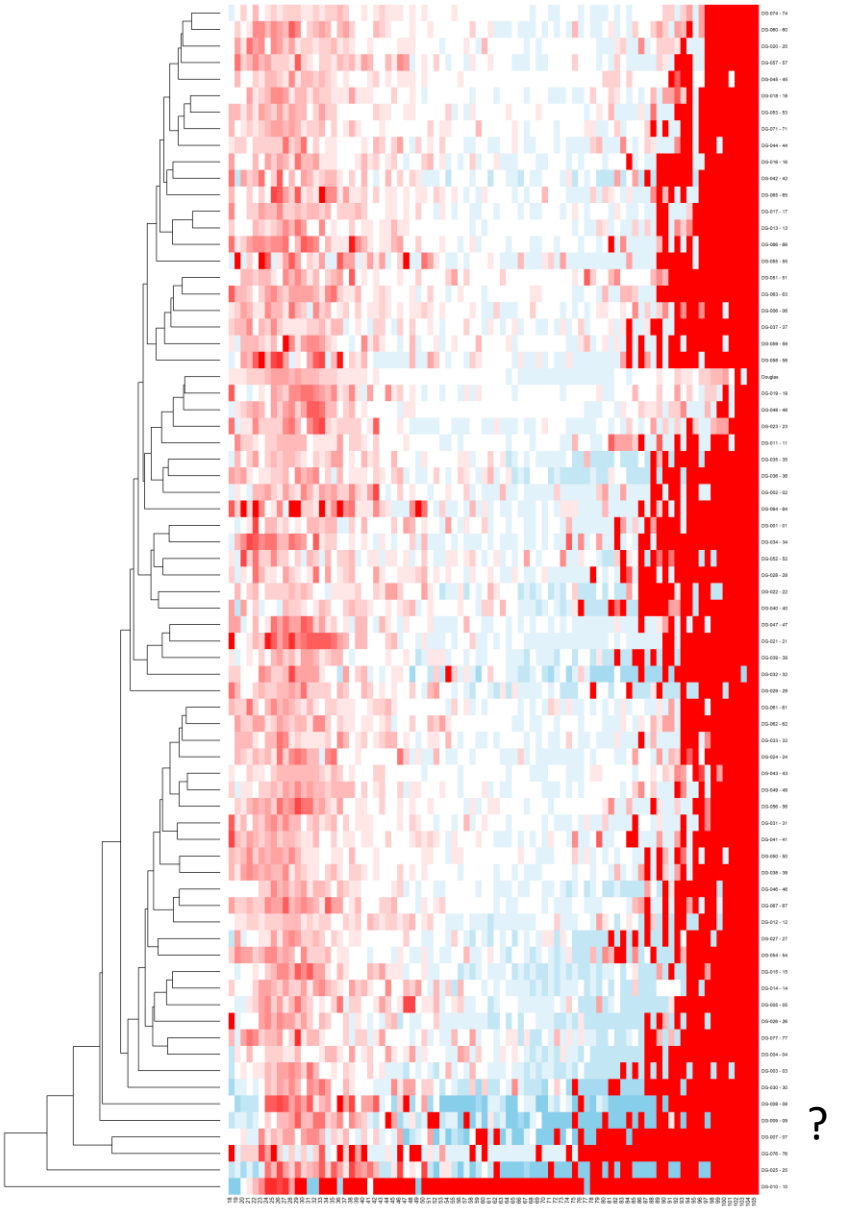
Turnout curves can vary considerably by precincts within a county.

Kansas General Election 2020-11-03: Normalized Voter Faction by Age
Douglas County = red line; 71 Precincts = grey lines;



Source: Kansas Secretary of State, Voter File 2021-02-05

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Source: Kansas Secretary of State, Voter File 2021-02-05 - efg 2022-04-28 0105

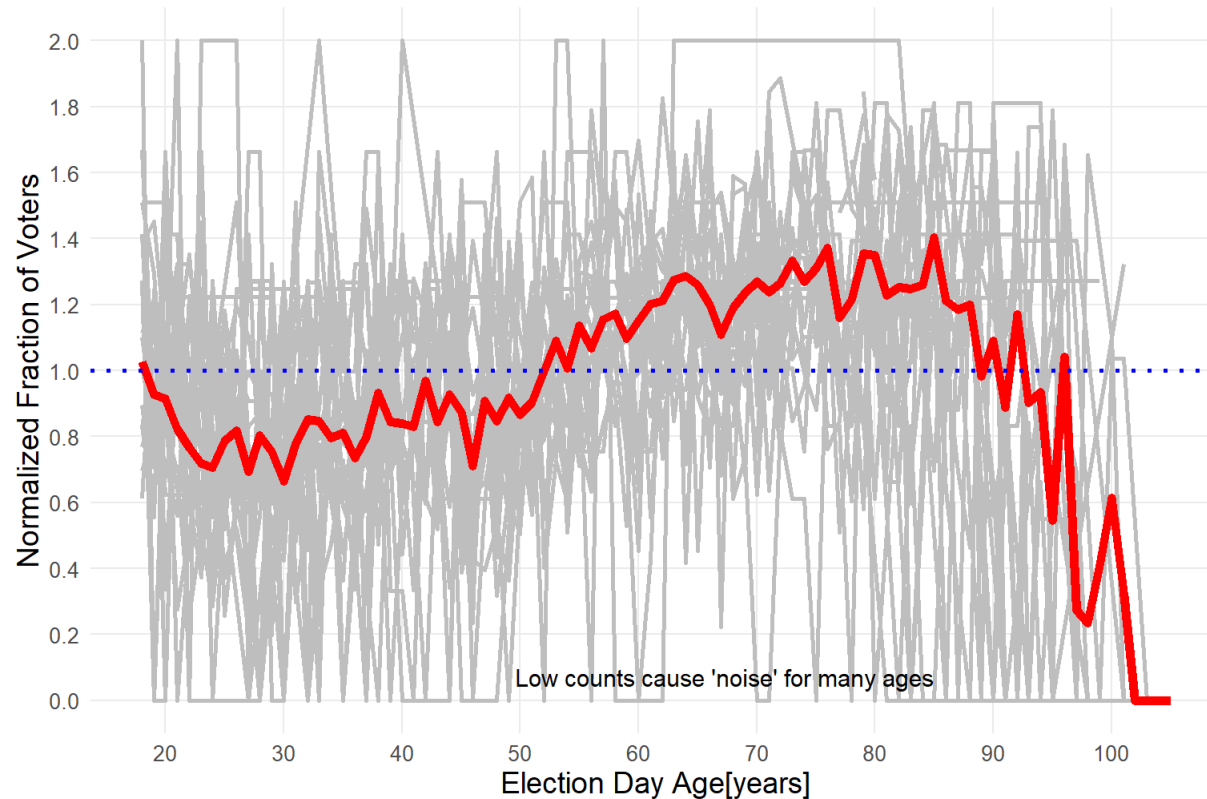


Normalized Turnout: Atchison County vs Precincts

Turnout curves can vary considerably by precincts within a county.

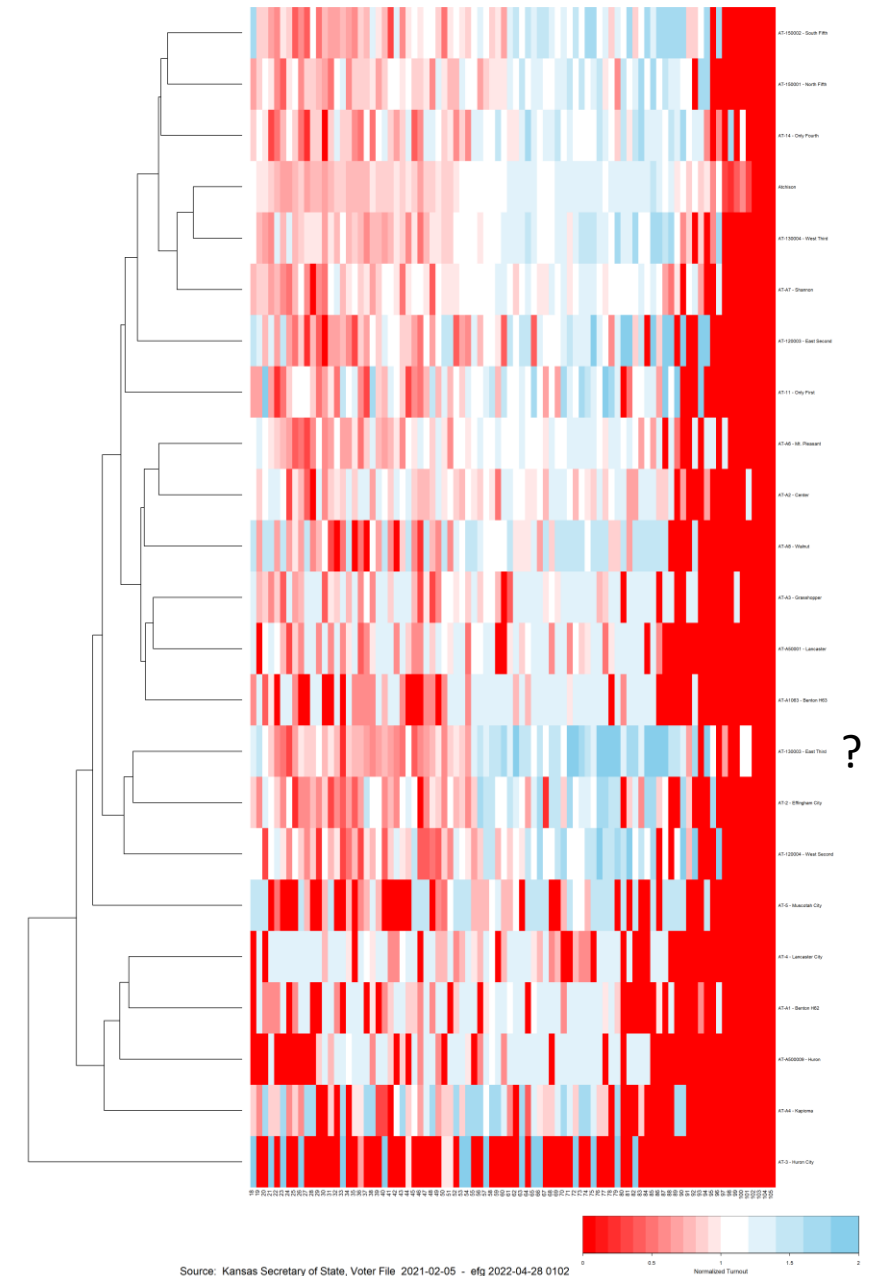
Kansas General Election 2020-11-03: Normalized Voter Faction by Age

Atchison County = red line; 22 Precincts = grey lines;



Source: Kansas Secretary of State, Voter File 2021-02-05

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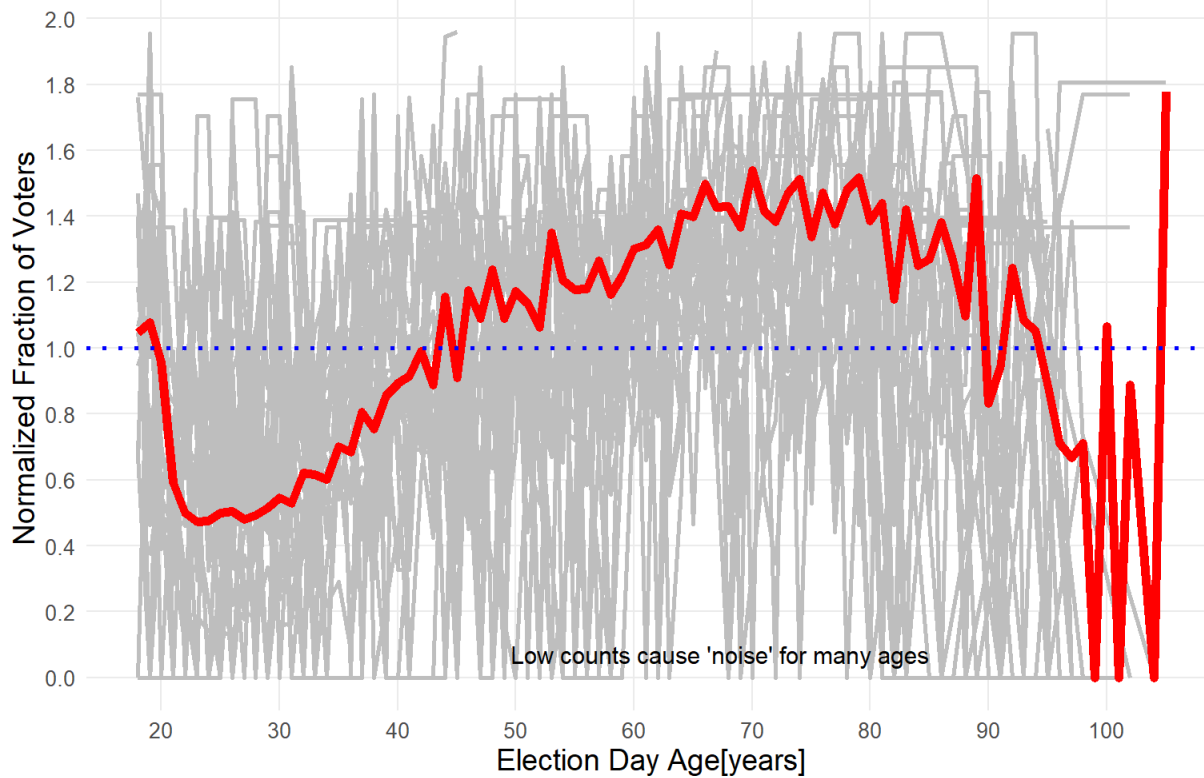
Source: Kansas Secretary of State, Voter File 2021-02-05 - efg 2022-04-28 0102

Normalized Turnout: Bourbon County vs Precincts

Turnout curves can vary considerably by precincts within a county.

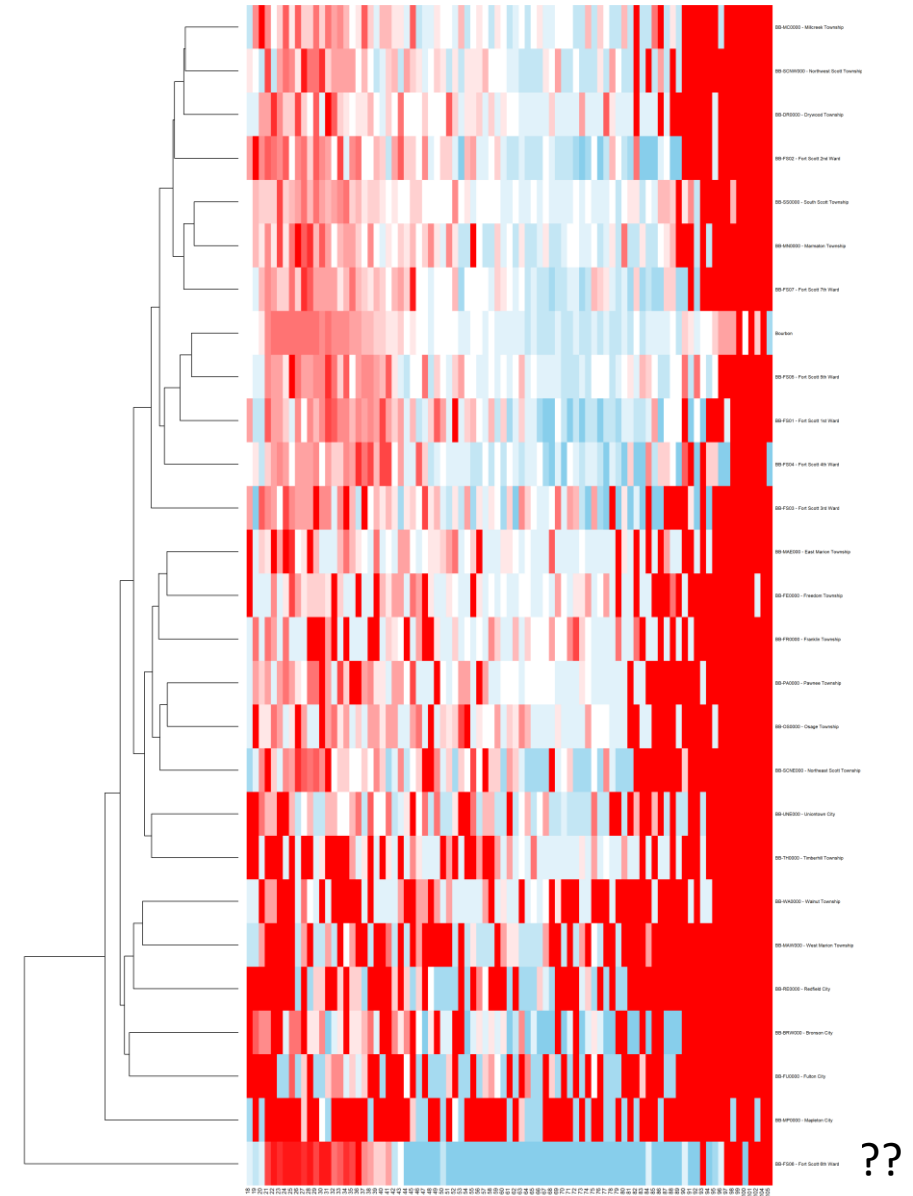
Kansas General Election 2020-11-03: Normalized Voter Faction by Age

Bourbon County = red line; 26 Precincts = grey lines;

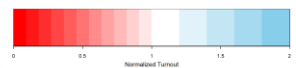


Source: Kansas Secretary of State, Voter File 2021-02-05

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Source: Kansas Secretary of State, Voter File 2021-02-05 - efg 2022-04-28 0102

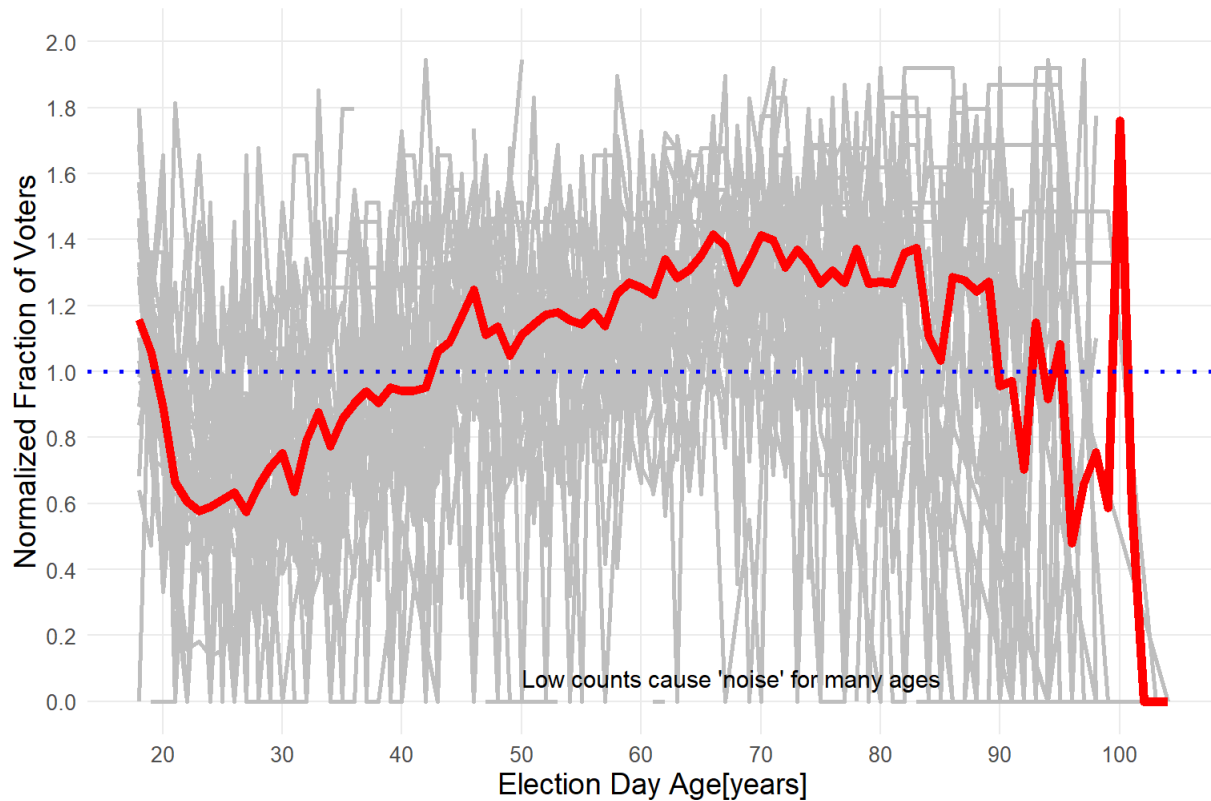


Normalized Turnout: Finney County vs Precincts

Turnout curves can vary considerably by precincts within a county.

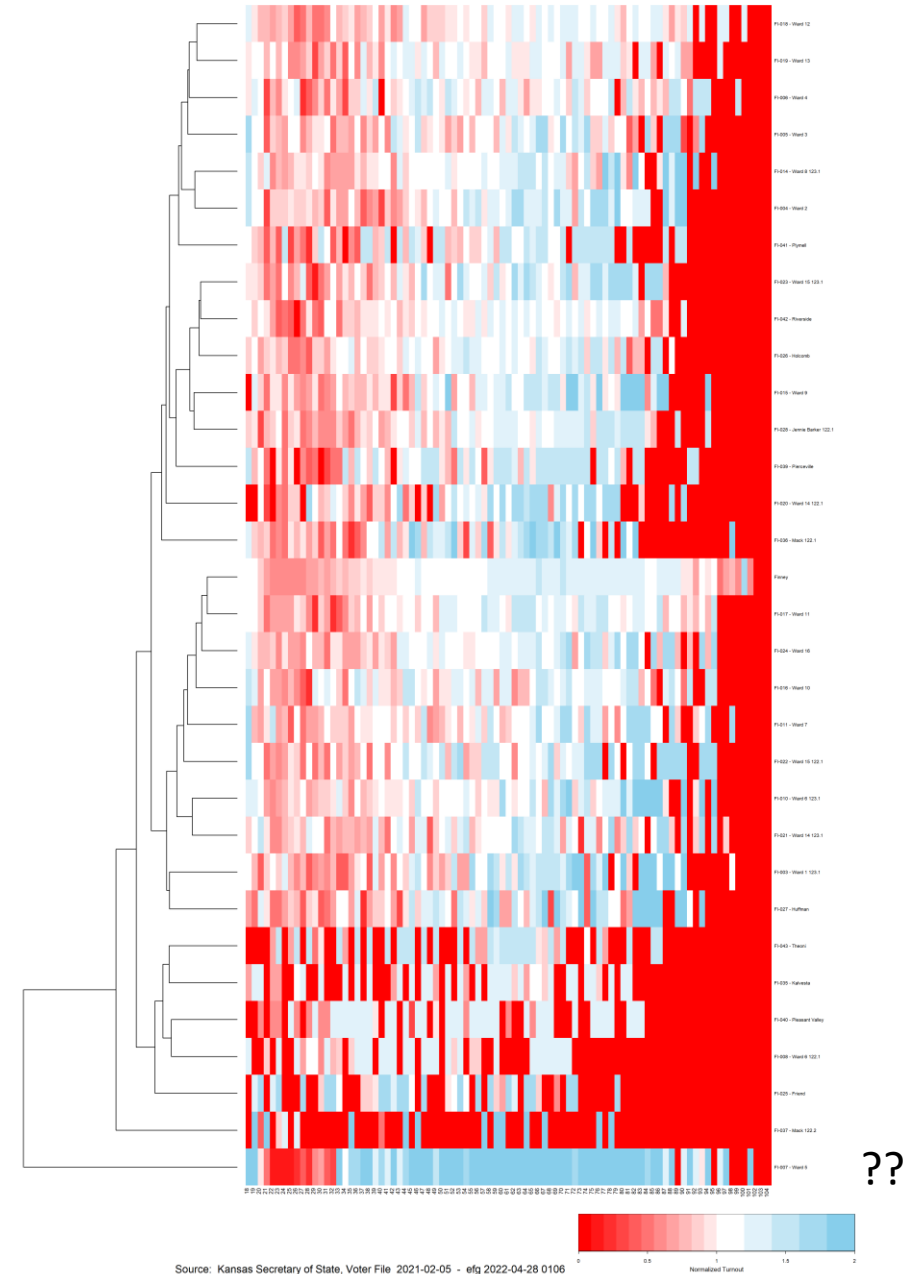
Kansas General Election 2020-11-03: Normalized Voter Fraction by Age

Finney County = red line; 31 Precincts = grey lines;



Source: Kansas Secretary of State, Voter File 2021-02-05

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Source: Kansas Secretary of State, Voter File 2021-02-05 - efg 2022-04-28 0106