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## Memorandum

To: Trialists

Fr: Curtis Meinert

Re: Platform trials

The term "platform trial" (multi-treatment trial) entered our vocabulary in the last 10 years or so with Bayesian adaptive designs. The term, as defined by Saville and Berry (**Clinical Trials** 2016, 358-366), refers to a *clinical trial with a single master protocol in which multiple treatments are evaluated simultaneously*. With the hype surrounding Bayesian adaptive designs, I am prompted to determine if the clinical trials enterprise has evolved to designs involving multiple treatments.

The tables below give counts of trials and numbers of treatment groups by funding source for trials registered in CT.gov 2005-09 and 2015-2019; times largely before and after the emergence of Bayesian adaptive designs.

The "standard trial" remains a one or two group trial. The percentages of trials involving more than 2 treatment groups is about the same for the two time periods.

Trials with > 2 treatment groups

	Year started	> 2 trt groups
Table 1 (all trials)	2005-09	20.85%
	2015-19	19.48%
Table 2 (drug trials)	2005-09	25.47%
	2015-19	29.12%
Table 3 (cancer trials)	2005-09	41.17%
	2015-19	42.88%

The biggest shift to trials involving >2 treatment groups was for US govt funded cancer trials (Table 3). There was not any noticeable corresponding shift for Industry or Other funded trials.

Table 1: Treatment groups by funder as registered on CT.gov

Funder	Yr started	1 trt group	2 trt groups	> 2 trt groups	Total no. trials	% 1 trt group	% 2 trt groups	% >2 trt groups
US govt	2005-09	1,687	2,208	2,143	6,038	27.94%	36.57%	35.49%
	2015-19	1,396	1,712	1,815	4,923	28.36%	34.78%	36.87%
Industry	2005-09	10,771	9,234	5,799	25,804	41.74%	35.79%	22.47%
	2015-19	10,614	9,942	5,969	26,525	40.02%	37.48%	22.50%
Other	2005-09	16,168	12,730	5,969	34,984	46.22%	36.39%	17.06%
	2015-19	33,268	26,851	12,491	72,610	45.82%	36.98%	17.20%
Total	2005-09	28,626	24,172	13,911	66,709	42.91%	36.24%	20.85%
	2015-19	45,278	38,505	20,275	104,058	43.51%	37.00%	19.48%

Table 2: Drug trials (phase 0-4) by funder as registered on CT.gov

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Funder	Yr started	1 trt group	2 trt groups	> 2 trt groups	Total no. trials	% 1 trt group	% 2 trt groups	% >2 trt groups
US govt	2005-09	302	331	479	1,112	27.16%	29.77%	43.08%
	2015-19	94	140	256	490	19.18%	28.57%	52.24%
Industry	2005-09	5,985	5,742	4,172	15,899	37.64%	36.12%	26.24%
	2015-19	3,724	5,494	3,783	13,001	28.64%	42.26%	29.10%
Other	2005-09	5,963	6,337	3,841	16,141	36.94%	39.26%	23.80%
	2015-19	6,092	9,706	6,345	22,143	27.51%	43.83%	28.65%
Total	2005-09	12,326	12,520	8,492	33,338	36.97%	37.55%	25.47%
	2015-19	9,938	15,340	10,384	35,662	27.87%	43.02%	29.12%

Table 3: Cancer and neoplasm drug trials (phase 0-4) by funder as registered on CT.gov

Funder	Yr started	1 trt group	2 trt groups	> 2 trt groups	Total no. trials	% 1 trt group	% 2 trt groups	% >2 trt groups
US govt	2005-09	137	271	567	975	14.05%	27.79%	58.15%
	2015-19	58	70	336	464	12.50%	15.09%	72.41%
Industry	2005-09	900	591	635	2,126	42.33%	27.80%	29.87%
	2015-19	856	689	745	2,290	37.38%	30.09%	32.53%
Other	2005-09	1,057	1,110	1,644	3,811	27.74%	29.13%	43.14%
	2015-19	1,261	1,588	2,314	5,163	24.42%	30.76%	44.82%
Total	2005-09	2,094	1,972	2,846	6,912	30.30%	28.53%	41.17%
	2015-19	2,175	2,347	3,395	7,917	27.47%	29.65%	42.88%