

Data analysis plan – Quantitative Example

Research question	Hypothesis	Construct	Outcome measure/source	Variable name in database	Intervention		Control		Method of analysis
					T0	T6	T0	T6	
NA	NA	Demographic information	Demographic survey/TaperMD	Age (mean, SD)		NA		NA	Mean (SD), range
				Income (n, %) \$20,000 - <\$50,000 \$50,000 - <\$70,000 \$70,000 - <\$100,000 \$100,000 - <\$150,000 ≥ \$150,000 Prefer not to answer					Frequency count
				Education (n, %) Elementary school High school College/university degree Post-graduate degree		NA		NA	Frequency count
What is the effect of a structured medication discontinuation clinical pathway designed to reduce polypharmacy on mean number of medications compared to usual practice?	Reduction in mean number of medications	Medications	Mean number of medications (primary outcome)/chat audit	meds_t0; meds_t6					Mean difference (95% CI)

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					T0	T6	T0	T6	
What is the effect of a structured medication discontinuation clinical pathway designed to reduce polypharmacy on patient outcomes and healthcare utilizations compared to usual practice?	Improved disease and treatment burden, quality of life, fatigue, pain, patient enablement, medication self-efficacy and lower, healthcare utilization will be reported in the intervention arm compared to the control arm at 6-months	Disease burden	Disease burden survey (mean, SD); scores range from 0-130 with higher scores representing higher burden	disbur_score_t0; disbur_score_t6					Mean difference (95% CI)
		Treatment burden	Brief treatment burden scale (mean, SD); scores range from 0-100 with higher scores representing higher burden	treatburscore_t0; treatburscore_t6;					Mean difference (95% CI)
		Quality of life	EQ5D-5L (mean, SD); scores range from -0.148 to 0.949 with higher scores representing higher quality of life	eq5d_score_t0; eq5d_score_t6					Mean difference (95% CI)
		Fatigue	Avlund mobility-tiredness subscale (mean, SD); scores range from 0-6 with higher scores representing more fatigue	mobfatscore_t0; mobfatscore_t6;					Mean difference (95% CI)
		Pain	Pain severity (mean, SD); scores range 0-10 with higher scores representing higher pain severity	severity_score_t0; severity_score_t6					Mean difference (95% CI)
			Pain interference (mean, SD); scores range 0-10 with higher scores representing higher pain severity	interfere_score_t0 interfere_score_t6					Mean difference (95% CI)

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		Patient enablement	Modified patient enablement instrument (mean, SD); score range from 0-12 with higher scores representing higher patient enablement	pei_score_t0; pei_score_t6					Mean difference (95% CI)
		Medication self-efficacy	Self-efficacy for appropriate medication use scale (Total score) (mean, SD)	seams_totalscore_t0; seams_totalscore_t6					Mean difference (95% CI)
			Self-efficacy for appropriate medication use scale (Difficult circumstances subscale) (mean, SD)	seams_difficultscore_t0; seams_difficultscore_t6					Mean difference (95% CI)
			Self-efficacy for appropriate medication use scale (Uncertain circumstances subscale) (mean, SD)	seams_uncertainscore_t0; seams_uncertainscore_t6					Mean difference (95% CI)
		Healthcare resource utilization (number of hospitalizations, emergency department visits, primary care visits)	Hospitalizations/chart audit (mean, SD)	hos_t0; hos_t6					Mean difference (95% CI)
			ED visits/chart audit (mean, SD)	ed_t0; ed_t6					Mean difference (95% CI)
			Primary care visits/chart audit (mean, SD)	primarycare_t0; primarycare_t6					Mean difference (95% CI)

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					T0	T6	T0	T6	
What is the experience of patients as they go through a structured medication discontinuation clinical pathway designed to reduce polypharmacy?	Not applicable	Lived experience with deprescribing process	Qualitative data: semantic, inductive thematic analysis						
		Satisfaction with the intervention (5-point Likert scale)	Single question (n, %)	sat_intervention	NA		NA	NA	Frequency count
		Satisfaction with care around medications (5-point Likert scale)	Single question (n, %)	sat_meds	NA		NA	NA	Frequency count
		Strengths and weaknesses of intervention	Qualitative data: content analysis						

T0=baseline; t6=6-month follow-up; SD=standard deviation