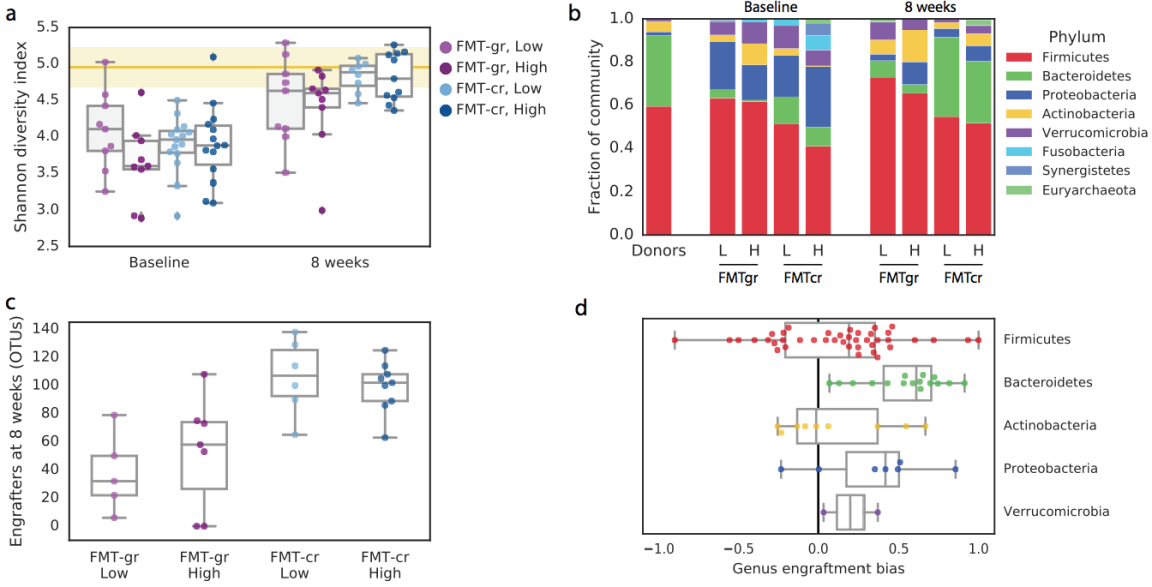
a
Shannon diversity index
5.5
5.0
4.5
4.0
3.5
3.0
2.5
Baseline
8 weeks
FMT-gr, Low
FMT-gr, High
FMT-cr, Low
FMT-cr, High
b
Baseline
8 weeks
Fraction of community
1.0
0.8
0.6
0.4
0.2
0.0
Donors
L
H
L
H
L
H
L
H
FMTgr
FMTcr
FMTgr
FMTcr
Phylum
Firmicutes
Bacteroidetes
Proteobacteria
Actinobacteria
Verrucomicrobia
Fusobacteria
Synergistetes
Euryarchaeota
c
Engrafters at 8 weeks (OTUs)
140
120
100
80
60
40
20
0
FMT-gr Low
FMT-gr High
FMT-cr Low
FMT-cr High
d
Firmicutes
Bacteroidetes
Actinobacteria
Proteobacteria
Verrucomicrobia
−1.0
−0.5
0.0
0.5
1.0
Genus engraftment bias

Figure 1: Study Flow Chart
Abbreviations: rCDI, recurrent C. Difficile; FMTgr, FMT capsules with gastric release; FMTcr, FMT capsules with colonic release

Figure 2: **a)** Gut community diversity increases in patients treated with FMTgr (FMT capsules gastric release) and FMTcr (FMT capsules colonic release) ($p<1e-6$). Yellow band shows mean and standard deviation of the microbial diversity of donor samples. Pre-FMT (post-vancomycin) rCDI patients have low community diversity in their gut microbiomes, as previously reported. Diversity at 8 weeks after FMTcr is higher than FMTgr ($p<0.01$) and is similar to the donors' diversity ($p=0.24$).
b) FMTcr restores healthy gut community. The mean taxonomic profile of donors and patients is illustrated at the phylum level by averaging across individuals in a group. Pre-FMT patients have high abundances of Proteobacteria and low abundances of Bacteroidetes. Post-FMT, patients receiving FMTcr have microbiome communities much more similar to healthy donors' than those receiving FMTgr. L, low dose; H, high dose.
c) FMTcr delivers more strains than FMTgr ($p<1e-4$, aggregating across dosage arms). Engrafters are defined as donor-specific operational taxonomic units (OTUs) persisting in the patient at 8 weeks post-FMT (see Methods).
d) Most genera preferentially engraft via FMTcr compared to FMTgr. Engraftment bias (see Methods) is shown for genera in the top five most abundant phyla. Positive values indicate preferential engraftment via FMTcr; negative values for FMTgr.