

Basic Checks – Data Gaps

	1	2	3	4	5	6	7	8	9	10
1	66%	66%	58%	65%	66%	60%	14%	66%	13%	76%
2	1%	67%	60%	18%	50%	8%	66%	65%	66%	32%
3	17%	81%	53%	61%	46%	80%	65%	66%	61%	65%
4	73%	61%	63%	67%	67%	63%	44%	73%	66%	2%
5	66%	64%	63%	29%	35%	52%	71%	76%	66%	28%
6	64%	90%	57%	16%	1%	64%	64%	64%	7%	61%
7	3%	62%	59%	65%	31%	59%	64%	63%	67%	87%
8	11%	64%	66%	64%	38%	56%	65%	65%	65%	65%
9	78%	80%	69%	15%	26%	66%	66%	68%	63%	0%
10	73%	79%	70%	64%	74%	47%	4%	0%	76%	63%
11	22%	55%	83%	56%	78%	63%	65%	69%	79%	69%
12	59%	68%	58%	38%	13%	67%	66%	48%	30%	76%
13	75%	60%	0%	68%	41%	46%	65%	65%	63%	77%
14	63%	37%	67%	68%	68%	21%	64%	23%	59%	64%
15	67%	74%	67%	64%	24%	60%	51%	1%	67%	19%
16	8%	75%	69%	1%	54%	70%	56%	63%	61%	59%
17	20%	64%	17%	66%	88%	67%	57%	2%	49%	62%
18	66%	75%	65%	66%	65%	90%	67%	64%	66%	72%
19	64%	66%	74%	62%	71%	69%	53%	65%	68%	13%
20	59%	64%	82%	66%	68%	66%	65%	77%	87%	76%
21	65%	55%	48%	68%	3%	76%	77%	2%	9%	62%
22	65%	33%	67%	65%	1%	64%	63%	81%	53%	53%
23	62%	28%	64%	65%	77%	63%	33%	67%	66%	67%
24	75%	2%	4%	62%	20%	61%	-	-	-	-

Summary visualization of the gaps in daily log data, by mission. This heat map shows the mean % days into the daily log for each mission, relative to the total possible number of days that could be entered (2010-2014 data).

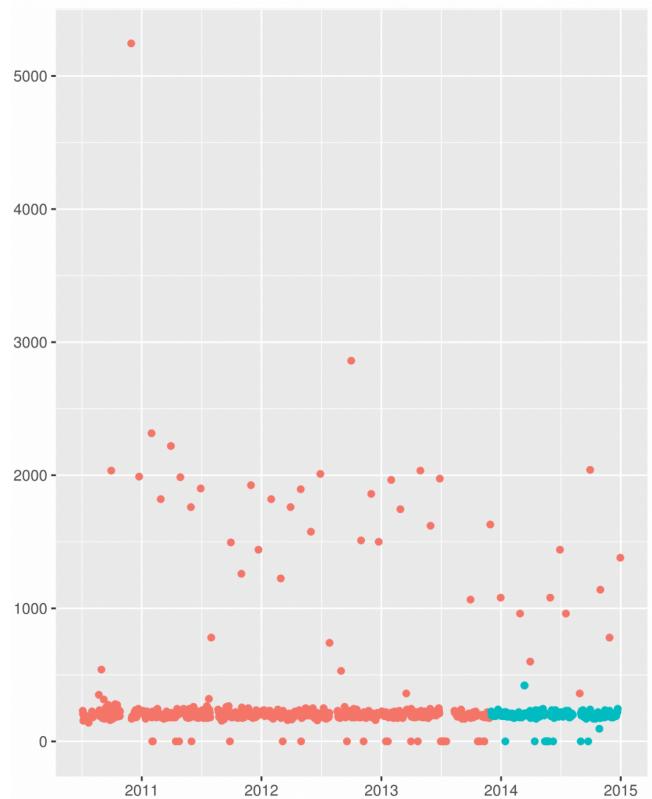
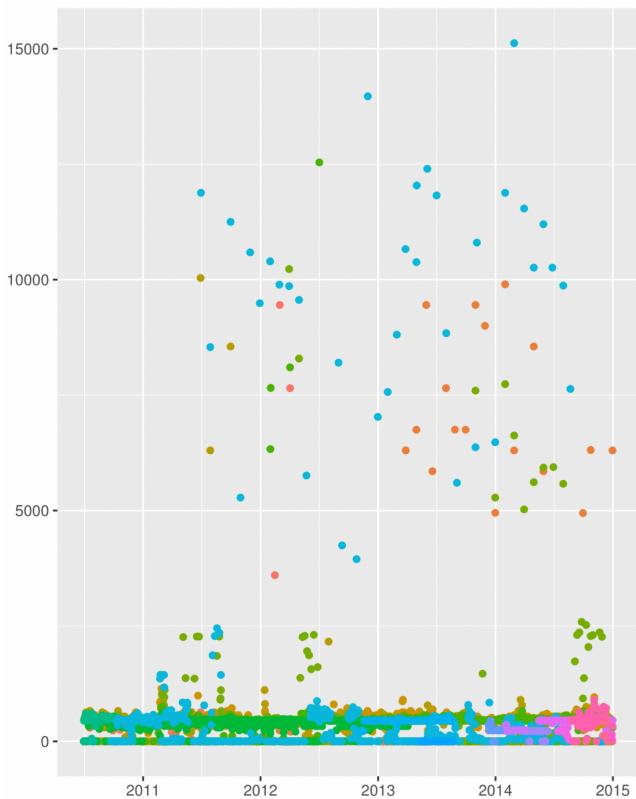
Basic Checks – Data Gaps

Start	Monthly Number of Cases	End	Low	High	Mean	Std Dev	Blanks	Zeros	Trend
19502		17265	15150	25072	19903	2612	0.0	0.0	379.2
46		19	3	46	19	9	0.0	0.0	-1.6
156		240	101	326	194	60	0.0	0.0	9.7
16		11	2	76	15	15	0.0	0.0	-2.9
3		13	0	105	9	15	0.0	0.4	-1.8
42		50	25	91	61	16	0.0	0.0	1.2
48		53	34	169	67	25	0.0	0.0	0.6
0		N.A.	0	0	0	0	2.2	9.8	0.0
56		104	34	150	73	25	0.0	0.0	4.6
0		N.A.	0	1	0	0	9.6	1.6	-0.2
195		189	112	544	244	91	0.0	0.0	12.4
0		N.A.	0	0	0	0	6.2	5.8	0.0
127		78	41	132	86	25	0.0	0.0	1.0
0		0	0	4	0	1	0.0	10.4	0.0
0		0	0	0	0	0	0.0	12.0	0.0
0		N.A.	0	0	0	0	2.7	9.3	0.0
0		0	0	0	0	0	0.0	12.0	0.0
0		0	0	4	0	1	0.0	11.3	-0.1
0		18	0	43	9	13	0.0	4.9	7.6
0		0	0	4	0	1	0.0	9.3	0.0
299		236	204	482	323	61	0.0	0.0	-5.0
33		50	15	53	33	9	0.0	0.0	1.1
0		0	0	0	0	0	0.0	12.0	0.0
0		0	0	0	0	0	0.0	12.0	0.0
2		23	1	48	18	11	0.0	0.0	6.3
11		9	1	33	11	6	0.0	0.0	1.2
0		0	0	0	0	0	0.0	12.0	0.0

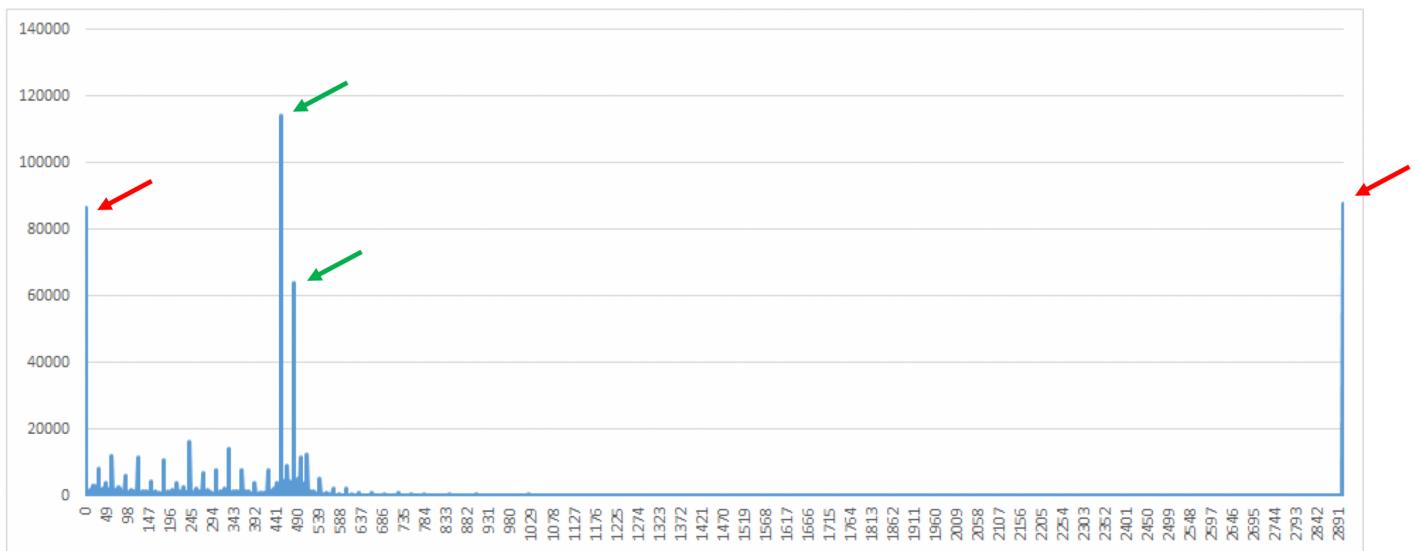
A sample of the summaries of the monthly log data for each mission. The “Blanks” field provides information about the number of months that have no data for that mission, across the years of the dataset reviewed (2010-2014). Top row represents the Grand Total for the entire Consular Network. Subsequent rows represent specific missions.

Entire Dataset Review

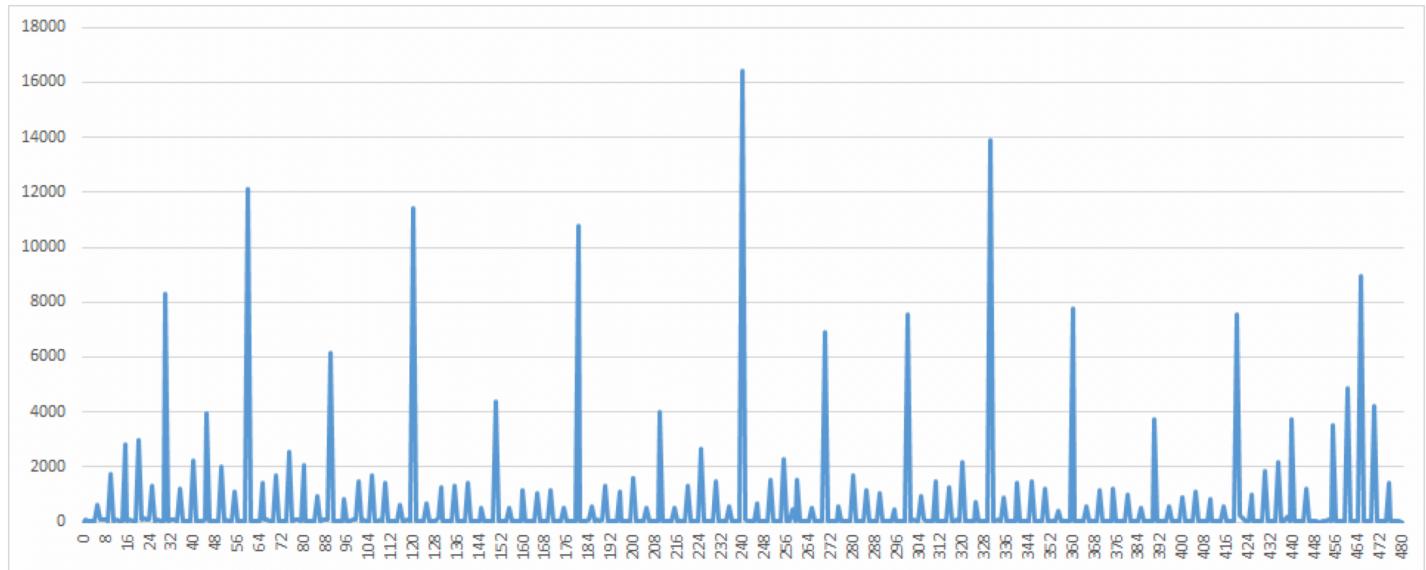
Total daily hours per mission employee (indicated by coloured dots) for 2 missions.



Bar chart of the frequency of specific daily work time values being reported by all employees (entries greater than 2900 mins are put in the same bin). Unsurprisingly, we see peaks around the 7.5-8 hours range (450-480 minutes), but there are also unexpected features: the number of 0 values being reported, and the number of values above 1440 mins (24 hours).

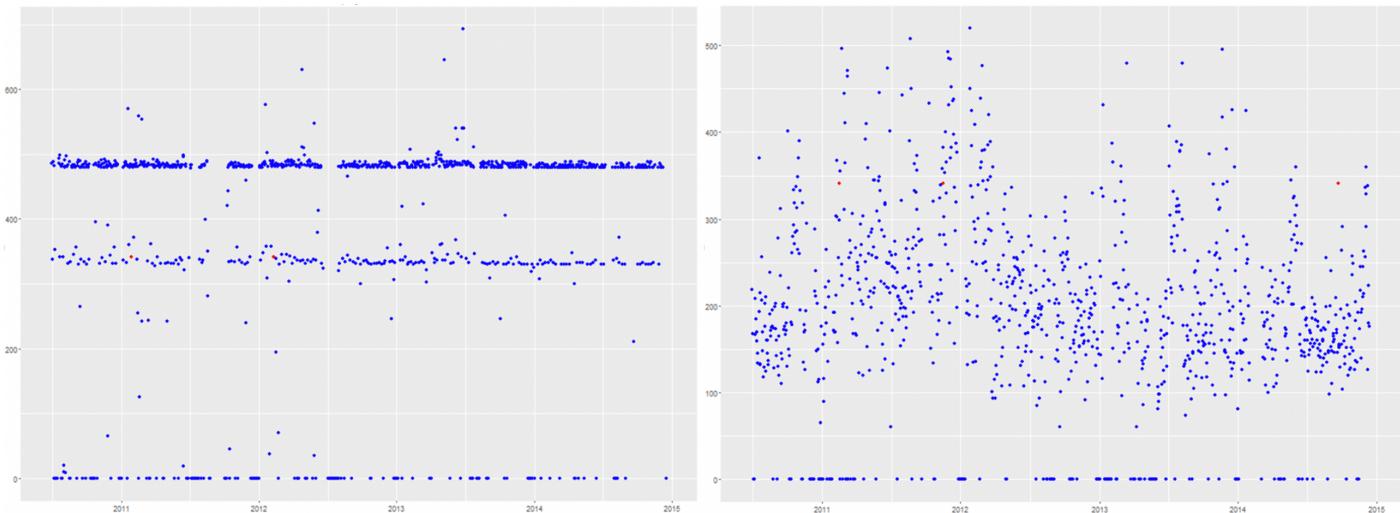


Entire Dataset Review



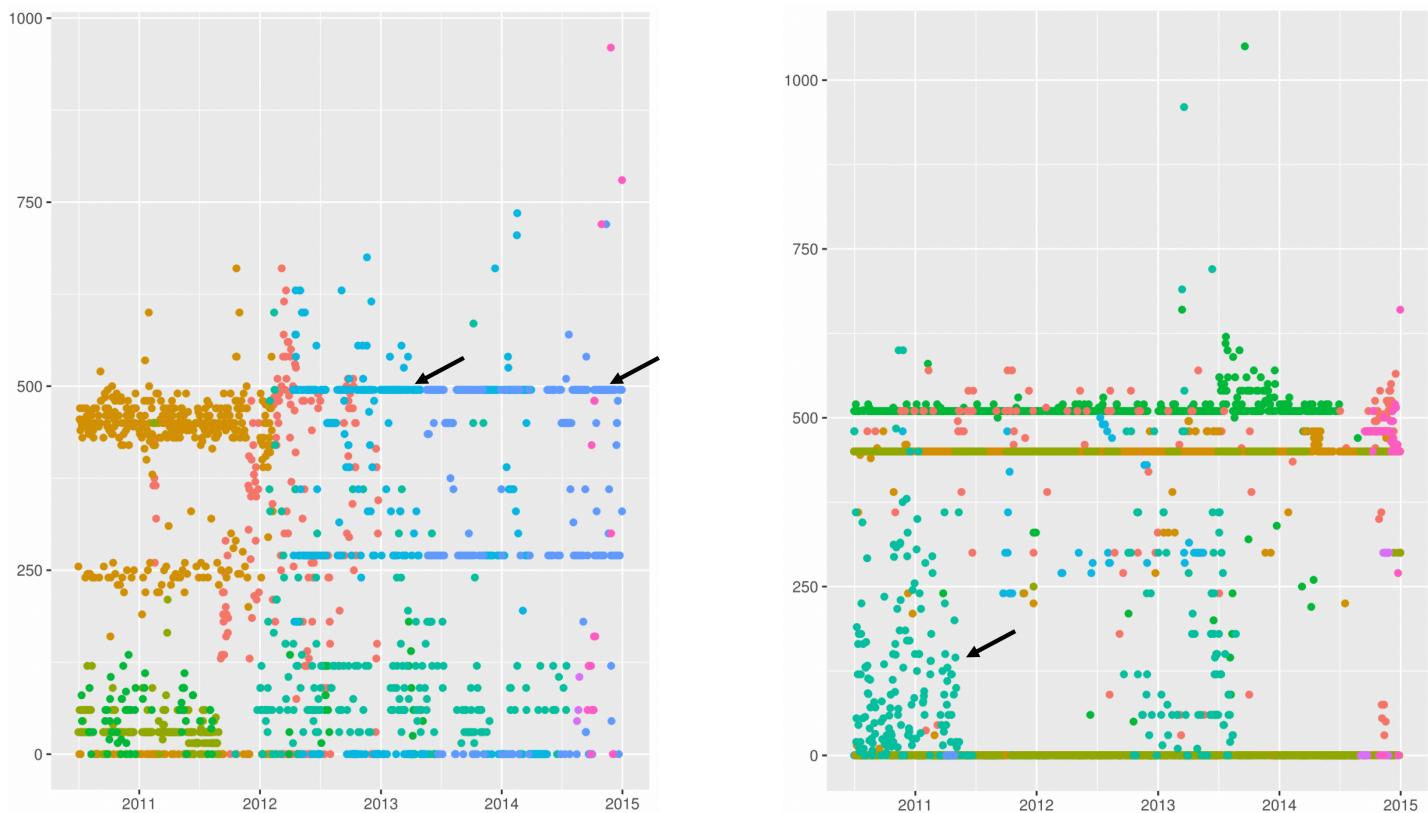
Heaping of work time entries, with counts removed
at 0, 450, and 480+ mins.

Reported daily hours for 2 employees (who reported 371 hours twice, in red);
constant employee on the left; irregular employee on the right.



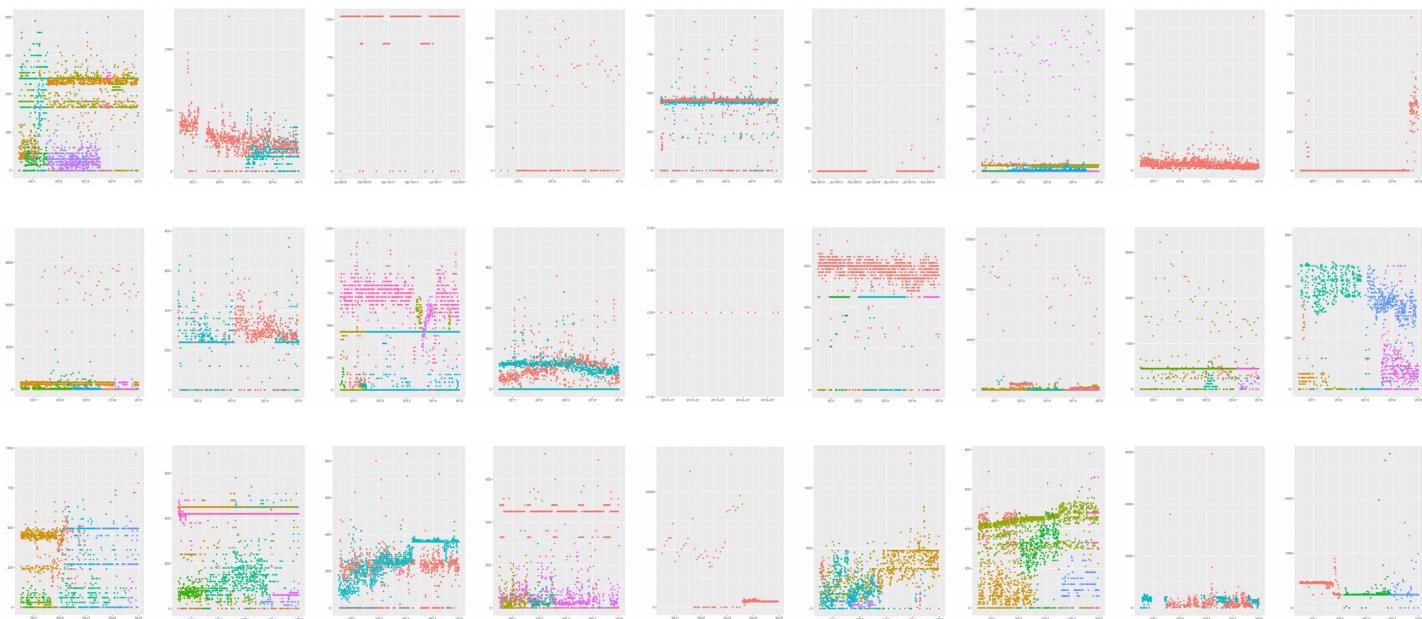
Entire Dataset Review

Total daily hours per mission employee (indicated by coloured dots) for 2 missions.



Mission-Level Dataset Review

Small multiples; self-reported daily work times per employee; mission by mission (selection I).

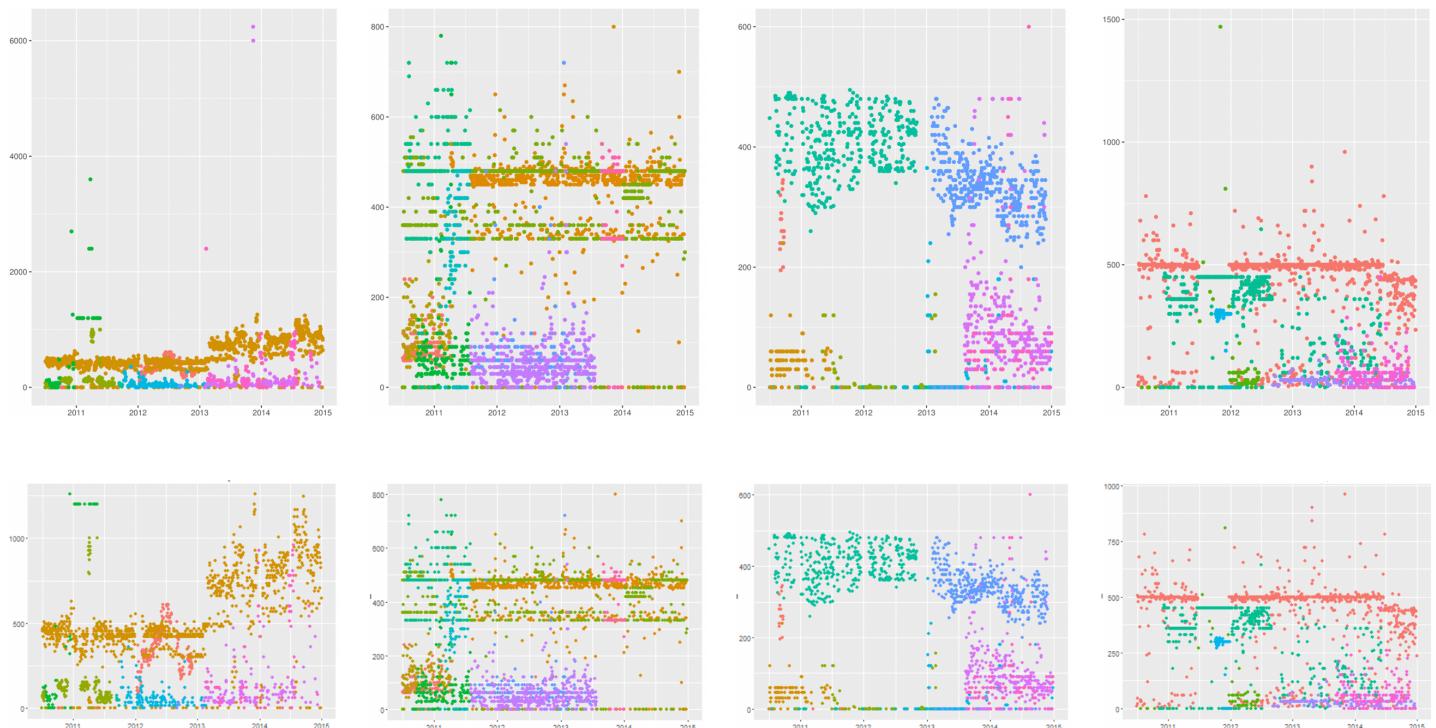


Mission-Level Dataset Review

Small multiples; self-reported daily work times per employee; mission by mission (selection II).

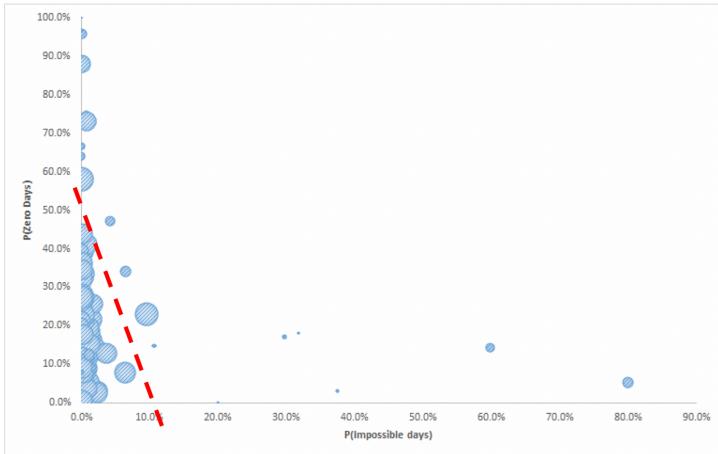


4 missions with anomalies (top); without (bottom).

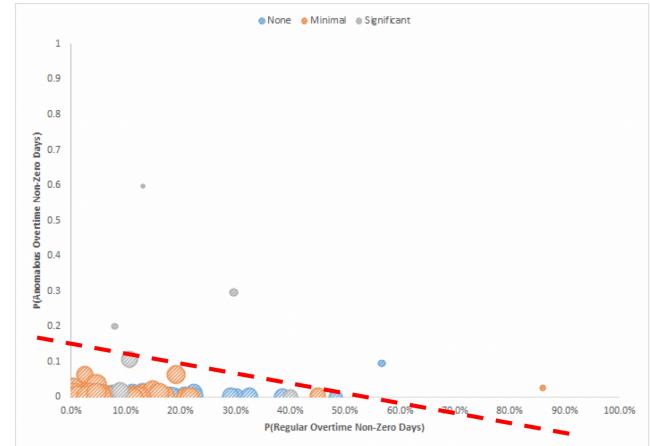


Plausibility of Work Hours

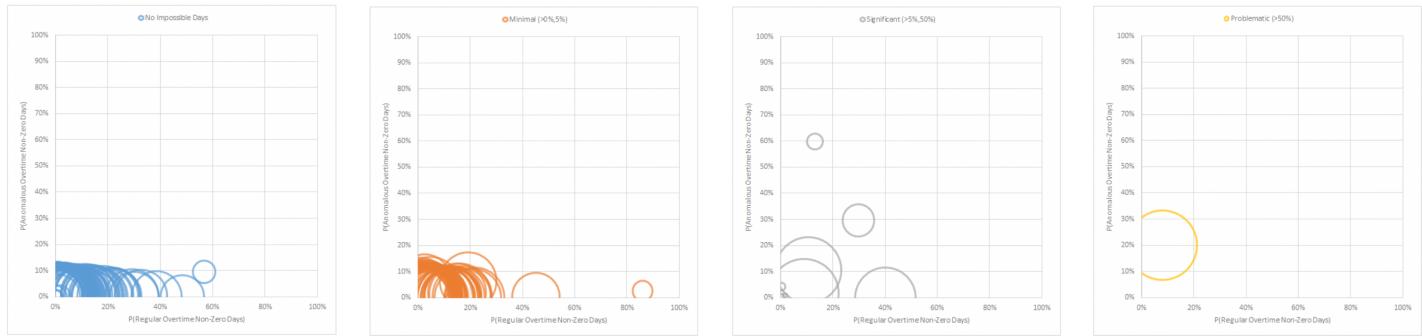
Proportion of Zero Days against Proportion of Impossible Days, per mission (size related to number of entries per mission)



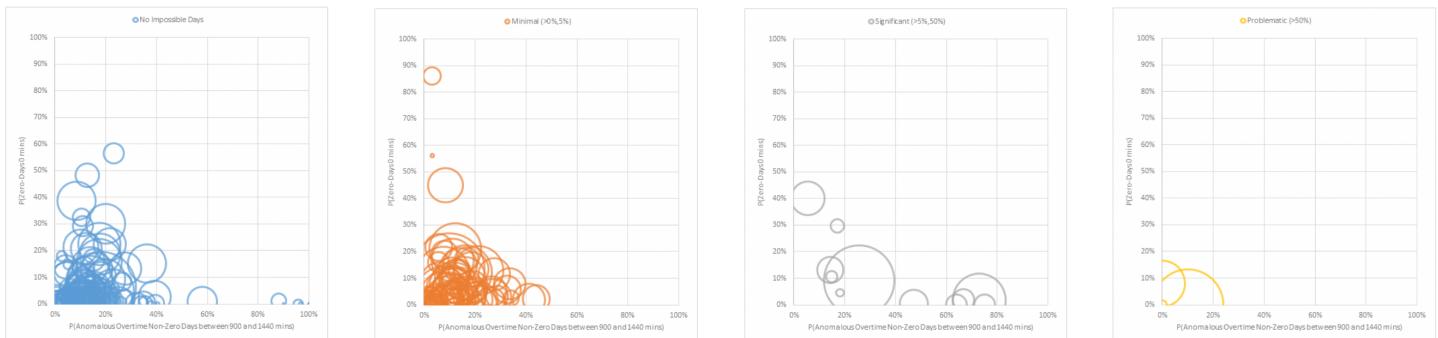
Proportion of Anomalous Overtime Days against Proportion of Plausible Overtime Days, per mission (size is related to number of entries per mission; colour to Proportion of Impossible Days)



Proportion of Anomalous Overtime Days against Proportion of Plausible Days, by mission and Proportion of Impossible Days (bubble size is linked to number of entries per mission).

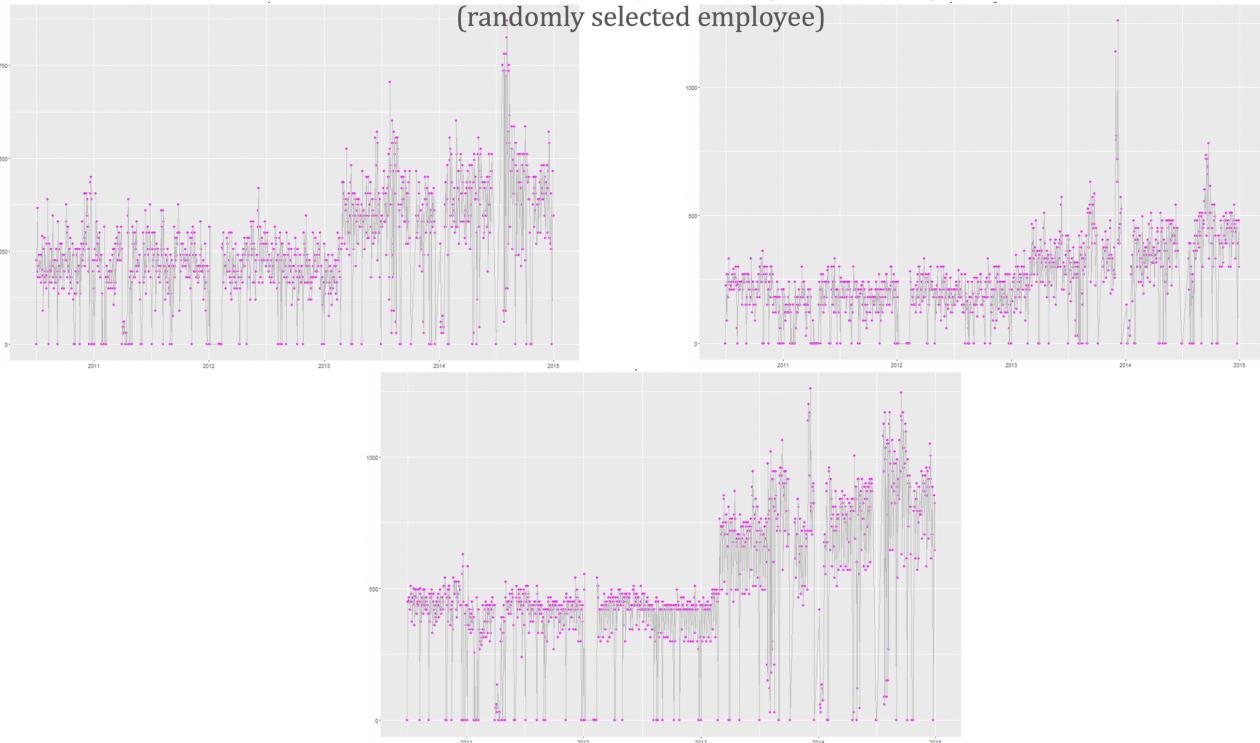


Proportion of Zero Days against Proportion of Anomalous Overtime Days, by mission and Proportion of Impossible Days (bubble size is linked to number of entries per mission).



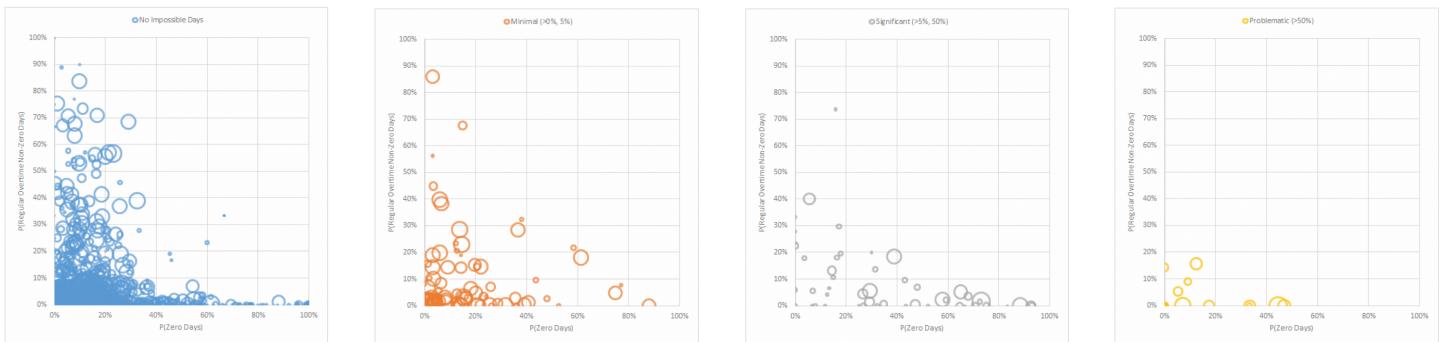
Employee-Level Dataset Review

Self-reported daily times; cases and services (top left); programs (top right); combined (bottom) (randomly selected employee)



Plausibility of Work Hours

Proportion of Anomalous Overtime Days against Proportion of Plausible Days, by employee and Proportion of Impossible Days (bubble size is linked to number of entries per employee).



Proportion of Zero Days against Proportion of Anomalous Overtime Days, by employee and Proportion of Impossible Days (bubble size is linked to number of entries per employee).

