MMA
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Age and Sex Adjusted Medical Equivalents

To reduce waits, we have to achieve a balance between the demand for service and the supply of service. This has to occur at the organization level, the practice level and at the individual level. At Kaiser Permanente, physicians are paid a salary. For the most part, the salaries are the same (this was changing at the end of my work there but the differences were based on satisfaction, outcomes and citizenship, not on workloads).

In salaried environments, if the salary is the same, the workloads have to be the same. Workload is determined by panel (the group of patients for whom a physician is responsible for providing primary care). In our work, we recognized that some patients had a greater expected burden than others. So a panel with a specific number of patients was not necessarily equal in workload to another panel of the same size. We looked at ways to equilibrate the workloads despite the absolute numbers of patients. Judging "acuity" was difficult. We looked at visits as acuity, but this was a self-fulfilling prophecy since physicians could "prove" their patients were sicker by creating more visits, which would be more indicative of practice style than patient acuity.

We also looked at other measures of "acuity" - number of meds, hospitalizations, visits to SC, etc. Some of this did predict workloads (increased visits) and some did not. For example, the sickest patients actually had less office visits (workload) due to transfer of the work to hospital, home care and specialty care.

We then looked at age and gender as a predictor of visits (workload), and found that they did indeed predict number of visits. We developed a tool to demonstrate this. We looked back over five years and collected visit data. We divided the patients arbitrarily into pre-set buckets based on age by month. We found that there were some natural cut offs and tried to maintain them. We divided these ages into two columns by gender. We then looked at the average number of visits per year for all patients (I think it was 3.19). We then divided the cells (the number of visits in each sub-cell) by that 3.19 number and derived a relative “risk of visit.”

The results are presented in the attached table. For example, a 0-12 month old male has a 5.02 times higher risk of a visit than a 50 year old male. Since all risk is relative, this is a zero sum game; the number of patients has to equal the number of ASAMES (age and sex adjusted medical equivalents). So if I have fewer patients due to higher risk, another provider might get more patients due to less risk. But if ASAME = ASAME then number of patients should equal number of patients. This allowed us to avoid inflation where some patients were counted more than others, but not counted less and ASAME or its equivalent was greater than patients. When that happens you simply cannot figure out quickly what is going on. since all docs have more ASAMES than patients and some patients invariably end up getting left off workloads. So this is my strong caution: this has to be a zero sum game.

Age and Sex Adjusted Medical Equivalents
Provided by Mark Murray, MD
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Age (Months)		Relative Weighting	
Low	**High**	**Male**	**Female**
0	11	5.02	4.66
12	23	3.28	2.99
24	35	2.05	1.97
36	47	1.72	1.62
48	59	1.47	1.46
60	119	0.98	1.00
120	179	0.74	0.79
180	239	0.54	0.72
240	299	0.47	0.70
300	359	0.60	0.82
360	419	0.63	0.84
420	479	0.66	0.86
480	539	0.69	0.89
540	599	0.76	0.98
600	659	0.87	1.10
660	719	1.00	1.20
720	779	1.17	1.31
780	839	1.36	1.46
840	899	1.55	1.60
900	959	1.68	1.70
960	1019	1.70	1.66
1020	9999	1.57	1.39