A simple explanation of the FTE calculation

The FTE calculation is a systematic, validated method for generating a recommended roster and budgeted FTE (CCDM Standard 4). In simple terms, a ward specific roster and FTE are derived from comparing patient demand with staff supply. The FTE calculation involves four main steps.

1. Determining patient demand

Patient demand is determined by patient acuity (or intensity of care) recorded using a validated acuity tool called TrendCare (CCDM Standard 2). Actual patient care hours from TrendCare are taken for a 12-month period. These care hours include a buffer for staff breaks and unexpected workload. To this is added hours for other essential ward/unit work and hours for shift co-ordination for that ward.

The total care hours are then plotted and used to generate a recommended roster for every shift (am, pm and night) and every day of the week (Monday through Sunday). The quality and integrity of the TrendCare data (including benchmarking) is checked before starting.

2. Generating a recommended roster

The process of generating the recommended roster is called roster testing. The goal of roster testing is to achieve the best match of staff supply for the patient demand. The best match means placing equal priority on quality patient care, quality work environment and best use of resources. To avoid excessive staff surpluses an accepted tolerance for staff deficits is applied. On the day these deficits may need to be filled by using the DHBs variance response system (CCDM Standard 5).

The recommended roster also takes into consideration the DHB's staffing strategy, models of care, HR practices and service provision model or specifications. The total hours needed for the recommended roster is then compared with the staff supply.

3. Determining staff supply

Staff supply is determined by taking the total hours per FTE per annum (i.e. 2086 hours) and deducting all planned leave and unplanned leave for that ward/unit. The calculation for staff supply also takes into account the ward's staff turnover and expected new graduates. All planned leave is based on the staff MECA entitlements, unplanned leave is based on weighted averages and orientation, mandatory training etc. is based on DHB policy. Deduction of this time from the total hours (per FTE, per annum) leaves the available hours for the recommended roster. The total FTE is then calculated by role (e.g. RN, RM, EN, HCA and senior designated positions).

4. Calculating the total FTE

The total hours needed for the recommended roster for each role are divided by the total hours available for each role. The hours are then converted into FTE. The same calculation is performed for supernumerary roles e.g. Charge Nurse Manager. The sum of the FTE for all roles results in the total FTE.

The total FTE results for each ward/unit are used for budget and financial forecasting. Four actions are needed to implement the FTE results into practice 1. set the budget, 2. adjust the establishment (if needed), 3. implement the new roster model and 4. monitor variance to roster and budget. Outcomes are reported and monitored through the core data set (CCDM Standard 3).

The whole process is overseen by the programme's governance arrangements (CCDM Standard 1).