

The implications of adult-child ratios for childcare providers

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1. This note illustrates the potential benefits of:
 - a. more relaxed staff-child ratios for children under two, from 1:3 to 1:4;
 - b. more relaxed ratios for two year olds, from 1:4 to 1:6;
 - c. nurseries taking advantage of the current 1:13 ratio for children aged over three, by employing a graduate-leader (the legal ratios for non-graduate and graduate led settings are 1:8 and 1:13, respectively);
2. The note examines the economic case through a stylised example, showing how the ratios provide flexibility for a full day care nursery to deliver more places and increase staff pay.

Hypothetical example

3. The following illustration is based on a full-day care (FDC) nursery which employs 11 full-time equivalent (FTE) staff: 3 childcare workers and a further 8 supervisory level staff. Initially, none of the staff are qualified to graduate level.¹
4. We assume that 10 of the 11 FTEs are working directly with children at any one time. The additional 1 x FTE time accounts for managerial / administrative duties and staff cover. Initially, 10 FTE staff could deliver up to 24 places to over 3s (using 3 FTEs), 12 places to 2 year olds (3 FTEs), and 12 places to under 2s (4 FTEs).²
5. Under a scenario where (a) legal ratios are relaxed for under 3s and (b) the setting moves from a ratio of 1:8 to 1:13 for over threes, the number of full-time places could be expanded to 73, a 52% increase.

Table 1 Potential expansion in places

¹ This is broadly in line from the Childcare and Early Years Provider Survey (DfE, 2011), which indicated a mean of 11.2 paid staff in an FDC, of which we estimate that around 10% were managerial, 60% supervisory and around 30% are "other paid" (non-supervisory). Staff responsibilities are based on the following definitions. Senior managers: overall responsibility for managing the provision in a setting. Supervisory staff: defined as those who are qualified to supervise a group of children on their own. They do not necessarily supervise other members of staff. Other paid childcare staff / other paid early years support staff: defined as other members of paid staff who are not qualified to supervise a group of children on their own but who are involved in running the childcare sessions. These may include classroom assistants or other support staff.

² This approximates for the mean distribution of places by age in FDCs - internal estimates based on the provider survey suggest 50% of FDC places are delivered to over 3s, 28% to 2 year olds and 22% to under 2s.

	Age group			Total
	Over 3s	2 year olds	Under 2s	
FTE staff time	3	3	4	10
Places per staff member (before)	8	4	3	
Maximum places (before)	24	12	12	48
Places per staff member (after)	13	6	4	
Maximum places (after)	39	18	16	73
Potential increase in places	15	6	4	25
% increase in places	63%	50%	33%	52%

6. The impact on revenue assumes these additional 25 places are filled on a full-time basis (39 hours a week, 52 weeks per year) at an hourly cost of £4 per hour. Ignoring other costs, gross revenue could increase by £202,800.
7. This creates headroom for the nursery to invest in higher staff pay. We demonstrate the potential headroom by assuming:
- Pay for 3 x childcare workers rises from £13,300 (average childcare worker in England) to £16,300 (average in France);
 - Pay for 6 x supervisors rises from £16,850 (average supervisor/manager in England) to £23,950 (average in France);
 - Pay for 2 of the supervisory staff rises from £16,850 (average supervisor/manager in England) to £33,250 (equivalent to a qualified primary school teacher). This reflects the increase in pay to employ two graduate level staff.³

Table 2 Potential increase in revenue and costs

	Age group			Total
	Over 3s	2 year olds	Under 2s	
Increase in gross revenue	£121,700	£48,700	£32,400	£202,800
Increase in childcare worker pay	£2,700	£2,700	£3,600	£9,000
Increase in supervisor pay	£12,800	£12,800	£17,000	£42,600
Increase in graduate & setting leader pay	£32,800	-		£32,800
Increase in non-wage labour costs	£13,041	£4,185	£5,562	£22,788
Increase in non-staff costs	£12,000	£4,800	£3,200	£20,000
Net increase (revenue over cost)	£48,359	£24,215	£3,038	£75,612

³ Pay benchmarks are based on Figure 3, *More Great Childcare*.

8. Staff costs are apportioned by the number of places delivered by age group. The exception is the additional costs of two graduates, which are allocated to the over 3s in Table 2. This reflects that the main benefit of the graduate level leader is to unlock the 1:13 ratio for over 3s.
9. Employers' labour costs are greater than simply the wage rate. "Non-wage labour costs", such as national insurance and pensions contributions, which vary proportionately with the number of hours worked. We assume that these costs are 27% of total wage costs.⁴
10. "Non-staff costs" might be expected to increase as the nursery delivers more places. If the setting already has spare capacity, then cost increases could be kept to a minimum. A setting reaching its capacity limits would need to invest more heavily to meet the expansion in places. Based on survey evidence, we assume non-staff costs represent 18% of total costs and rise in proportion with the increase in the number of places, by 52%.
11. Even taking account of higher pay and rising overheads, this nursery might expect a net increase in revenue of £75,612. There are several ways in which this additional revenue might be reinvested. It could, for example, accommodate a reduction in fees to make places more affordable - hourly fees could fall by up to 51 pence from £4 per hour to £3.49 per hour.⁵ It might allow the nursery to surpass more stretching international pay benchmarks, such as childcare workers in Germany (£19,150) or Sweden (£22,450).⁶ Alternatively, the net increase may be required to meet other contingencies, such as additional training costs or expansion.
12. The allocation of increased revenue and costs across the age groups is purely indicative. It shows that the ratio changes for under 3s to have a significant impact on revenue generation (for a fixed number of staff), although most of the gross revenue in this example is associated with the use of a 1:13 rather than 1:8 ratio for the over 3s. The balance would depend on how many places are delivered to each age group. Survey data shows that roughly half of places in full day care settings are delivered to over threes, so this example is reasonably representative of the average, but it will vary significantly across nurseries.

⁴ The latest (2004) National Labour Cost Survey showed average non-wage labour costs constitute around 27% of total employer labour costs.

⁵ Dividing the net revenue gain by 73 full time places, 52 weeks and 39 hours gives the maximum fee reduction.

⁶ Figure 3, More Great Childcare.

13. It should be stressed that the above example is stylised. Most settings do not operate at full child occupancy rates year round, and there are other constraints on offering places up to the capacity implied by legal maximum ratios. However this serves to illustrate how the regulatory framework sets the conditions under which providers operate, with greater flexibility in the adult to child ratios providing considerable potential for expansion and investment.