

## Analysis of Survey of Operational Costs 2006

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### Background

- 1 In June and July 2006 the Ministry of Education conducted the Survey of Operational Costs of Early Childhood providers. The aim of this survey was to collect information from services about the range and level of costs they face and how these costs change over time. The results from this survey have been used to inform the setting of funding rates for Free ECE and advice to government on ECE funding rates for 2007/08.
- 2 The purpose of the survey was to gauge the cost of providing ECE to the regulated standard, but in practice the survey results tell us about the actual cost of provision, which is higher due to some services operating above the regulatory standard or providing additional services.
- 3 Surveys were sent to all licensed ECE services and requested information about expenditure on a range of categories over the most recent fiscal year for which they have audited annual accounts.
- 4 A similar survey was conducted in July 2005, but for the 2006 survey questions about additional costs relating to property (accommodation and equipment) were added and some questions reworded for clarity.
- 5 This report analyses some key aspects of the data collected, covering response rates, average cost per hour and the proportion of expenditure spent on major cost categories.
- 6 The majority of our analysis was done for the purpose of setting funding rates for Free ECE so has concentrated on over-two costs, however some analysis on under-two costs has also been included.
- 7 Responses from services that were received up to 1 September, and data received from Te Kōhanga Reo National Trust on behalf of Ngā Kōhanga Reo, are included in the analysis.
- 3 Survey responses were provided both including and excluding GST. Where returns indicated that GST exclusive numbers had been supplied, 12.5% was added to enable analysis on a GST inclusive basis.

## Response Rates

- 4 Overall the response rate from services was good with 56% of services responding. A response rate of 25%, given suitable coverage of service types, would have been adequate to provide a reliable indication of costs<sup>1</sup>. This compares with the 2005 response rate of 48%. As in 2005, responses have good coverage for all service types, rates, centre ownership, regions, and levels of rurality.
- 5 The response rate by service type is shown in the table below. The response rate from all service types was good. The very high response rates from kindergartens and te kōhanga reo are due to kindergarten associations and Te Kōhanga Reo National Trust completing the surveys collectively for their members.

**Table 1: Response Rates by Service Type<sup>2</sup>**

	<b>Responses</b>	<b>Total</b>	<b>Response Rate</b>
Ed & Care	706	1841	38.3%
Kindergarten	493	619	79.6%
Homebased	124	201	61.7%
Playcentre	243	474	51.3%
TKR	468	486	96.3%
<b>Total</b>	<b>2034</b>	<b>3621</b>	<b>56.2%</b>

- 6 The response rate by funding band was also generally good. For teacher-led centre-based services the response was typically higher the greater the proportion of registered teachers. The lowest response rate was 28% which is still reasonable for analysis. Caution needs to be taken in analysing costs by funding band due to the very low numbers of services at some funding rates. There are very few services that receive the sessional and playcentre quality rates, as well as relatively few that responded, so the average cost will be influenced by individual high or low costs more on these rates than others.

**Table 2: Response Rates by Funding Band<sup>3</sup>**

	<b>Responses</b>	<b>Total</b>	<b>Response Rate</b>
TKR- Standard	240	486 <sup>4</sup>	96.3%
TKR- Quality	228		
Playcentre-Standard	238	462	51.5%
Playcentre-Quality	5	12	41.7%
Homebased-Standard	78	120	65.0%
Homebased-Quality	46	81	56.8%
All Day 100%	100	161	62.1%
All Day 80 - 99%	208	420	49.5%
All Day 50 - 79%	230	687	33.5%
All Day 25 - 49%	107	380	28.2%
All Day 0 – 24%	10	36	27.8%
<i>All Day subtotal</i>	<i>655</i>	<i>1684</i>	<i>38.9%</i>
Sessional 100%	462	607	76.1%

<sup>1</sup> Based on HOI's Dec 04 report on survey and price index mechanisms

<sup>2</sup> Totals as at 1 July 2006

<sup>3</sup> Totals as at 1 July 2006

<sup>4</sup> The total TKR include 5 TKR on a protected rate.

Sessional 80 – 99%	20	23	87.0%
Sessional 50 – 79%	28	59	47.5%
Sessional 25 – 49%	6	10	60.0%
Sessional 0 - 24%	2	3	66.7%
<i>Sessional subtotal</i>	<i>518</i>	<i>702</i>	<i>73.8%</i>
Protected	26	74 <sup>b</sup>	35.1%
<b>Total</b>	<b>2034</b>	<b>3621</b>	<b>56.2%</b>

- 7 Response rates have also been analysed by centre ownership, separating services into those owned privately and those owned by a community organisation. Similar to the 2005 survey, the response rate for community based services was substantially higher than for private services. One large reason for this difference is that ngā kōhanga reo, kindergartens and playcentres had high response rates and these service types are all owned by community organisations. These results are shown in the following table.

**Table 3: Response Rates by Ownership**

<b>Ownership</b>	<b>Responses</b>	<b>Total</b>	<b>Response Rate</b>
Community	1756	2442	71.9%
Private	278	1179	23.6%
<b>Total</b>	<b>2034</b>	<b>3621</b>	<b>56.6%</b>

- 8 The other two dimensions considered in analysing response rates were region and urban/rural profile. The response rates from all regions were reasonable ranging from just under 40% in Waikato and Bay of Plenty to over 85% in Southland and Tasman. Response rates based on urban/rural profile were also representative with particularly good response rates from remote areas and rural centres.
- 9 Data for ngā kōhanga reo has been obtained from Te Kōhanga Reo National Trust. This includes cost data for each kōhanga reo, but does not identify individual kōhanga, or their location. That means that region and urban/rural profile are unable to be determined, and so cost by region or urban/rural profile cannot be analysed.

### **Average Cost Results**

- 10 One of the key results from the operating cost survey is the average cost per hour of ECE provision. This has been calculated and analysed by service type, region, rurality, rate, and ownership.
- 11 Throughout this report, costs have been averaged over total enrolled hours for each service type and age of child. Total enrolled hours are estimated using enrolled hours information from the 2005 RS61 survey<sup>6</sup>, except for ngā kōhanga reo for which annual figures have been provided with the survey data for under-two and over-two enrolled hours for each service.

<sup>5</sup> The total protected include 2 Ed & Care centres on the standard rate.

<sup>6</sup> The ratio of enrolled hours to funded hours in the reference week of the RS61 survey is applied to total funded hours for the year to estimate total enrolled hours for the year.

- 12 As costs in many cases relate to provision for both under-two and over-two children, it is necessary to make an assumption about the relative cost of under-two and over-two provision. Where services provide both under-two and over-two services, costs have been allocated across both types of service assuming that under-two services are more costly by multiples of two and 2.94 for all day services and sessional services respectively<sup>7</sup>.
- 13 The total cost used to calculate the average cost includes all responses to questions in the Operating Cost Survey. All responses are added together to get the total, except for the questions about current spending on property costs and money set aside for future property spending (survey question numbers 4d to 4g). Adding these responses together would count some spending twice, so the responses about current spending are averaged with future spending. This approach reflects the fact that property spending can be infrequent but large for services.
- 14 The accounts of some home-based ECE services do not include all costs of provision. In those services, educators' costs are met by parents' fees, and fees are paid to educators rather than the service. This needed to be adjusted for because Free ECE means parents will not be paying educators, so the funding rate needs to cover all costs, whether the service currently meets the costs or not. We adjusted for this by increasing reported educator costs for services that reported particularly low costs (less than the half the expected average cost per child hour<sup>8</sup>). These costs have been imputed at the level of the expected average cost. Nine services had to have educator salary costs imputed, increasing total educator salary cost by approximately two million dollars to 27 million.

### Cost by Service Type

- 15 The average cost by service type is shown in the table below. This shows that education & care services have the highest average cost followed by te kōhanga reo, kindergarten, homebased, and playcentre.

**Table 4: Average Cost per Enrolled Hour by Service Type**

Average Cost	Over-two	Under-two
Ed&Care	6.09	12.85
Kindergarten	5.50	N/A

<sup>7</sup> We have estimated the ratio of under-two to over-two costs taking into account actual average staffing ratios, the overall share of salary and non-salary costs:

Non-salary costs vary with the number of staff. As under-two children require more staff they also incur proportionately more non-salary costs. As we have assumed no salary differential between under-two and over-two staff, estimation of the cost ratio becomes trivial. It is the same as the ratio of the effective staffing ratios, in the case of all day services this is 8.4:4.2 or 2.

Non-salary costs vary with the number of child hours. Under-two children now have the same non-salary costs per hour as over-two children and the ratio declines to 1.71.

This report uses a cost-splitting ratio of 2:1 in all-day service types and 2.94:1 in sessional service types, which is consistent with the approach used in developing Free ECE funding rates.

<sup>8</sup> The expected average educator cost per hour was calculated at \$3.60. This was calculated from a sample of Home-based providers for which educator costs were known to be included in full.

Homebased	5.40	10.80
Playcentre	3.85	7.71
TKR	5.66	11.32

- 16 The range of costs that services face has also been analysed. The mean and median are shown below along with the 10<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup>, and 90<sup>th</sup> percentiles. These indicate the percentage of services that spend less than a set amount.
- 17 The range of expenditure varies considerably by service type. Kindergartens are by far the most tightly clustered service type followed by homebased services. The range of costs is influenced by the age structure at each service and also the number of services reporting as groups. Many kindergarten and homebased providers answered the survey for several services combined which has the effect of averaging costs and removing outliers.

**Table 5: Cost by Service Type per Over-two Enrolled Hour including Capital**

	Mean	Median	90%	75%	25%	10%
Ed&Care	6.09	5.90	8.41	7.01	4.91	3.97
Kindergarten	5.50	5.62	5.71	5.71	5.21	4.98
Homebased	5.40	5.55	6.61	6.04	4.91	3.86
Playcentre	3.85	3.58	5.62	4.60	2.79	2.08
TKR	5.66	5.32	7.35	6.19	4.60	3.89

- 18 More analysis has been able to be undertaken on education & care services due to the number of responses and because most responses were not for large groups of services. The following analysis of education and care costs excludes kindergartens.

### **Cost by Funding Band (Education & Care Services only)**

- 19 For both all-day and sessional education & care services there is a clear pattern that the cost per enrolled hour increases with the percentage of registered teachers. The exception is the lowest percentage band, which has very few services. These average costs are not the same as the Free funding rates; for information on how these averages were used in calculating the rates see the accompanying report 'Calculation of Free Rates'. It appears from other analysis that many sessional non-kindergarten services operate well above the regulated ratios. Please note that average cost figures may be influenced by individual services in funding bands with small sample sizes.

**Table 6: Ed & Care Centres Average Cost per Enrolled Hour by Funding Band<sup>9</sup>**

Average Cost	Over-twos	Under-twos	N=
All Day 100%	7.29	14.58	40
All Day 80-99%	6.62	13.25	201
All Day 50-79%	5.73	11.50	213
All Day 25-49%	5.27	10.55	100
All Day 0-25%	5.99	11.98	7
Sessional 100%	6.76	19.86	26
Sessional 80-99%	6.09	17.90	18
Sessional 50-79%	5.80	17.06	26

<sup>9</sup> Where there are fewer than 5 respondents in a category, categories have been combined in order to preserve anonymity.

Sessional 25-49%	4.95	14.54	6
Sessional 0-24%			
Protected	5.92	11.84	23

### Cost by Region (Education & Care Services only)

- 20 The average cost by region<sup>10</sup> is shown below. These average rates tend to reflect the proportions of services in the different funding bands: when average costs by region for each funding band are compared, there are no regions for which the cost of provision is consistently or uniformly above the average, although some samples become very small. Average cost per over-two hour for each region is also shown for the two largest funding bands, 'All Day 80-99%' and 'All Day 50-79%'. Please note that average cost figures may be influenced by individual services where sample sizes are small.

**Table 7: Ed & Care Centres Average Cost per Over-two Enrolled Hour by Region<sup>11</sup>**

	Average Cost Overall	Average Cost for All Day 80-99%	N= All Day 80-99%	Average Cost for All Day 50-79%	N= All Day 50-79%
Auckland	5.94	7.07	40	5.53	60
Wellington	6.54	6.69	28	6.09	28
Hamilton	6.38	6.49	7	6.33	11
Rest of North Island	5.76	5.98	50	5.58	76
Christchurch	6.96	7.42	29	6.09	7
Dunedin	6.71	5.64	8	5.87	30
Rest of South Island	6.05	6.58	39		
All	6.09	6.62	201	5.73	212

- 21 Generally the larger cities tend to have a higher cost per enrolled hour than the rest of the country. The exception to this is Auckland which has close to the lowest average rate per enrolled hour in the country.
- 22 Based on this data, the main differences in the cost of provision appear due to the age of the children enrolled, the type of service and the proportion of registered teachers, rather than location.

### Cost by Ownership (Education & Care Services only)

- 23 The cost per hour is generally higher at community based services than at privately owned services. The cost per hour is higher for community-based

<sup>10</sup> Regions are comprised of groups of Territorial Local Authorities as follows:  
Auckland: North Shore City, Waitakere City, Auckland City, Manukau City, Papakura District  
Hamilton: Hamilton City  
Wellington: Porirua City, Upper Hutt City, Lower Hutt City, Wellington City  
Other North Island: all other North Island TLAs  
Christchurch: Christchurch City  
Dunedin: Dunedin City  
Other South Island: all other South Island TLAs

<sup>11</sup> Where there are fewer than 5 respondents in a category, categories have been combined.

than private services for all but two funding bands. Again, please note that average cost figures may be influenced by individual services where sample sizes are small.

**Table 8: Ed & Care Centres Average Over-two Cost by Funding Band and Ownership<sup>12</sup>**

	Community		Private	
	Average Cost/Hr	N=	Average Cost/Hr	N=
All Day 100%	7.36	29	7.09	11
All Day 80-99%	6.92	140	5.95	61
All Day 50-79%	5.96	127	5.38	85
All Day 25-49%	5.35	69	5.02	33
All Day 0-25%	6.86	5		
Sessional 100%	6.64	24	6.04	11
Sessional 80-99%	6.14	17		
Sessional 50-79%	5.76	27		
Sessional 25-49%				
Sessional 0-24%		0		
Protected	5.86	20		
All	6.29	458	5.62	201

<sup>12</sup> Where there are fewer than 5 respondents in a category, categories have been combined. There were no responses from community-owned services in the Sessional 0-24% band.