



Impact of Whizz-Kidz support to Primary Care Trusts

An evaluation

October 2011

Summary: analysis of Whizz-Kidz work with PCTs to improve wheelchair provision indicates that involvement of Whizz-Kidz results in financial savings and improvements in quality of life.

Better quality chair

Lower costs

Unit costs per user of the service of about £800 versus £2,100 under “business-as-usual”: **a 60% saving.**

Cost per wheelchair issued of about £1,100 versus over £2,500 under “business-as-usual”: **a 55% saving.**

Shorter waiting times

Higher satisfaction & mobility

Better quality and lower costs results in higher demand. Meeting that additional unmet demand results in **a cost per quality-adjusted life year (QALY) of £7,700 to £9,800.** NICE typically approves treatment for use by the NHS if it costs less than £20,000 per QALY.

Wider benefits

There are also additional benefits that it has not been possible to quantify in this study. These benefits would be additional to those above and include:

- **wider healthcare cost savings:** faster access to the right equipment prevents other healthcare conditions developing in both children and their carers (e.g. spinal injuries) that are costly to treat.
- **improved quality of life for carers:** faster access to the right equipment frees up time for carers (often family members) to take on more paying work or spend more time with other members of their family, improving their quality of life.

- **Background**

- **Approach**

- **Results**

- **Overall conclusion**

Whizz-Kidz provides young people with the mobility equipment they need to lead fun and active childhoods.



There are about 70,000 young people in the UK who could benefit from improved mobility equipment, including wheelchairs.



Whizz-Kidz works with them, often in collaboration with local Primary Care Trusts (PCTs), to deliver the wheelchairs and other mobility services they require

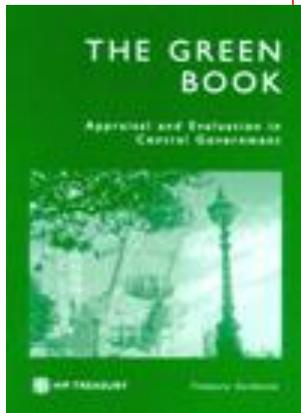


Whizz-Kidz is a registered charity whose funding comes mainly from fundraising and corporate support, with some income coming from payments for its services to the NHS.



Whizz-Kidz asked Frontier Economics to examine the impact of the services it provides in conjunction with NHS bodies.

Our advice helps clients make better decisions. That advice blends economics with innovative thinking, hard analysis and common sense.



Government has a well developed framework for assessing the impact of its interventions. It is based on HM Treasury's Green Book: *Appraisal and Evaluation in Central Government*.

The Green Book provides a high level framework. Its application in practice depends on an understanding of the particular issue and applying the right economic tools robustly.



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Our approach develops a clear counterfactual for each type of impact, using quantitative estimates where available and qualitative results elsewhere.

The analysis is built on comparing the cost and quality of service under a:

- **business-as-usual (“counterfactual”) scenario:** this scenario uses evidence available from across PCTs about the amount spent and outputs delivered by Wheelchair Services and some specific data from Tower Hamlets prior to the involvement of Whizz-Kidz
- **Whizz-Kidz (“intervention”) scenario:** this scenario draws on evidence from Whizz-Kidz involvement with Tower Hamlets and the wider roll-out of its programmes in support of Wheelchair Services.

We examine each stage of the process to deliver wheelchairs under the two scenarios. We then compare the costs and benefits in each scenario. The benefits are divided into immediate outputs (delivery of different types of wheelchairs) and longer term outcomes (avoidance of future expenditure, longer term quality of life improvements).

Our analysis focuses on healthcare issues. Where assumptions are needed we adopt a conservative approach and so are likely to underestimate the net benefit to healthcare. In addition, there is anecdotal evidence of improvements in a wider set of outcomes – including improved performance at school and subsequently improved chance of employment. We do not include these wider benefits in our analysis. For this reason alone our estimates of the net impact are likely to be a conservative estimate of the total impact on society.

This evaluation was done as a *pro bono* piece of analysis for Whizz-Kidz. It draws on the best existing data and detailed conversations with Whizz-Kidz staff and applies that evidence to a best practice framework for evaluation. There was not scope to conduct a bespoke data collection exercise or to interview other stakeholders. Anecdotal evidence and publicly available data suggests that the specific experience from which this analysis is drawn (primarily around NHS Tower Hamlets) is representative of wheelchair services more widely. This could be tested as part of further analysis.

Disabled children can access wheelchair services through a referral process that takes them to a local wheelchair service, usually supported by the local primary care trust.

R

Referral from GP, occupational therapist or other medical professional to a PCT Wheelchair Service.

A

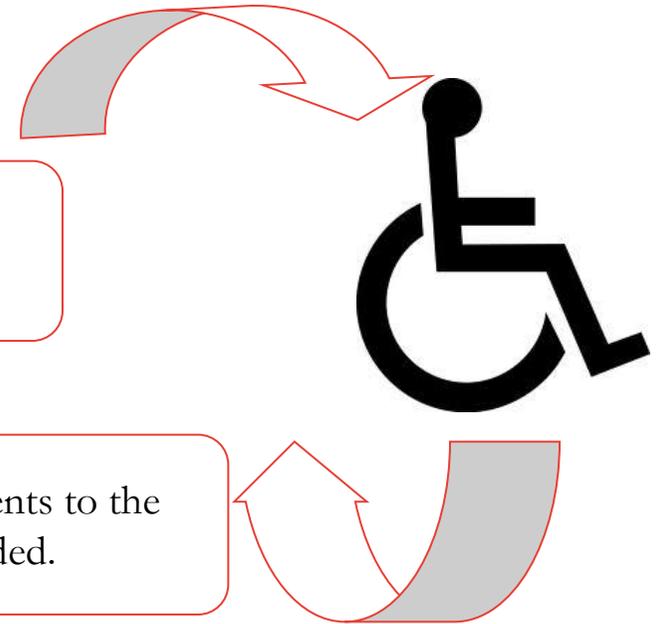
An **assessment** of need that determines (sometimes across more than one visit) what type of wheelchair to provide.

P

Provision of the equipment – which may or may not perfectly match what was identified in the assessment.

M&M

Ongoing **monitoring, maintenance** – adjustments to the chair and monitoring for when a new one is needed.



Referral – Whizz-Kidz have developed a number of innovations that makes the process between referral and assessment more efficient.

Whizz-Kidz

Whizz-Kidz' collaboration with Tower Hamlets Wheelchair Service has developed a number of innovations that make the referral process faster and more efficient. They include collection of:

- as much data as possible about the child during the referral period (by phone and email), before they turn up to be fitted for a chair
- information about their entire life circumstances rather than the narrow reason for the chair (e.g. schooling, family circumstances, level of spatial awareness)

The result is that the referral process sets up the actual assessment to make “a child in a chair in a day” possible.

The Tower Hamlets collaboration suggested that appointments would be made within 1 to 4 weeks of referral, depending on the urgency of the need.

Typical PCT

The referral process is used as a way of getting the child to meet someone who can evaluate their needs.

Limited information is collected during this process, with the actual assessment appointment used to collect most of the information needed to determine the child's needs.

Source of referrals

Available data indicates that about:

- 50% of referrals to Wheelchair Services come from occupational or physio therapists
- 25% – 40% are self-referrals
- 5 – 10 % of referrals come from GPs
- balance from other sources (e.g. social workers, trusts)

Source: Whizz-Kidz surveys of PCTs

Assessment – the efficiency and effectiveness of the assessment depends on what is done leading up to the assessment, as well as who is there on the day.

Whizz-Kidz

The collection of information during the referral stage means that Whizz-Kidz have a good idea of what chair is required when the child arrives for their assessment.

The information they collect looks “at the person as a whole” and so they are able to provide a wheelchair that suits the requirements of the life they lead.

That means there is a chair that is ready for the child when they turn up, with a team on hand that can make the final adjustments to the equipment that are needed.

Whizz-Kidz will have specific paediatric expertise in the clinic on the day to make the final assessment.

Typical PCT

PCT Wheelchair Services typically use the face-to-face assessment visit to collect the information needed to decide on the appropriate chair. That often means more than one session is required to get the right chair.

Wheelchair services typically serve both adults and children so there is unlikely to be a paediatric specialist available. The reasons children need wheelchairs, and their requirements, are often different from adults, which may delay children getting the right chairs.

Provision – Whizz-Kidz process leading up to providing the chair allows them to put a “child in a chair in a day”.

Whizz-Kidz

Whizz-Kidz operate a “child in a chair in a day” programme that puts most children into chairs immediately.

The work done at the referral and assessment stages facilitates this process. It means information about the child is collected before they meet.

They undertake a full inventory of what the PCT holds in storage to understand what is currently available.

Whizz-Kidz has looked closely at the supply chain and their processes to improve how they source and provide wheelchairs. They have worked closely with wheelchair manufacturers to achieve free consignment stock and to limit the time for delivery of new chairs. They have also agreed a matrix of equipment from which therapists can prescribe. The equipment can then be adjusted at the assessment to meet the specific needs of the child.

Over the past 3 years Whizz-Kidz has worked closely with dealers and suppliers to find those offering best value for money. As a consequence they currently work with 3 preferred manufacturers, with one dealer as a strategic partner providing logistical support.

Typical PCT

PCTs tend to have a stock of wheelchairs but have poor information about what is actually in that stock. Therefore, they struggle to match it to the needs of the children and often end up ordering new chairs.

The fact that they use the assessments to collect the information about a child’s needs means they are usually unable to provide the right chair at the first appointment.

Wheelchairs are not a high priority service for PCTs and so ordering chairs often involves long delays. Furthermore, because PCTs tend to order small volumes it appears they do not get as good a price as Whizz-Kidz is able to get for a given quality chair. For example, they often source seating regionally and the chair itself locally which requires them to deal with different suppliers and coordinate deliveries.

Finally, the mixture of wheelchairs provided is different. PCTs tend to provide manual (often relatively heavy) wheelchairs. Whizz-Kidz tends to provide either light-weight manual chairs or powered chairs depending on the needs of the child.

Monitoring and maintenance – Whizz-Kidz’ ability to supply chairs that more closely match need and their system of check-ups helps to reduce future costs.

Whizz-Kidz

The Whizz-Kidz approach from referral through assessment and provision has a knock-on effect in terms of monitoring and maintenance. Their choice of chair incorporates future growth of the child reducing the need to order new chairs in the future.

They also operate a pro-active “check up” policy that reviews how the child is progressing and the chair is holding up, rather than waiting for something to break.

Their knowledge of the specific needs of children and the policy of checking up means they can better predict when a new chair will be needed and plan accordingly. That feeds back into the assessment and provision.

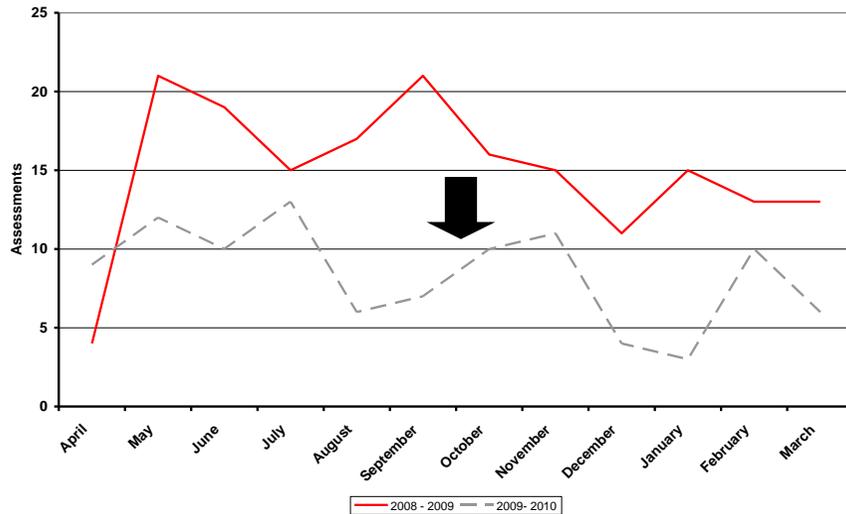
Typical PCT

PCT Wheelchair services typically will only undertake maintenance if something breaks and the child turns up at a clinic.

At that point, new parts or a new chair may have to be ordered but with no pre-warning that is likely to take time, during which the child has to continue with what they have.

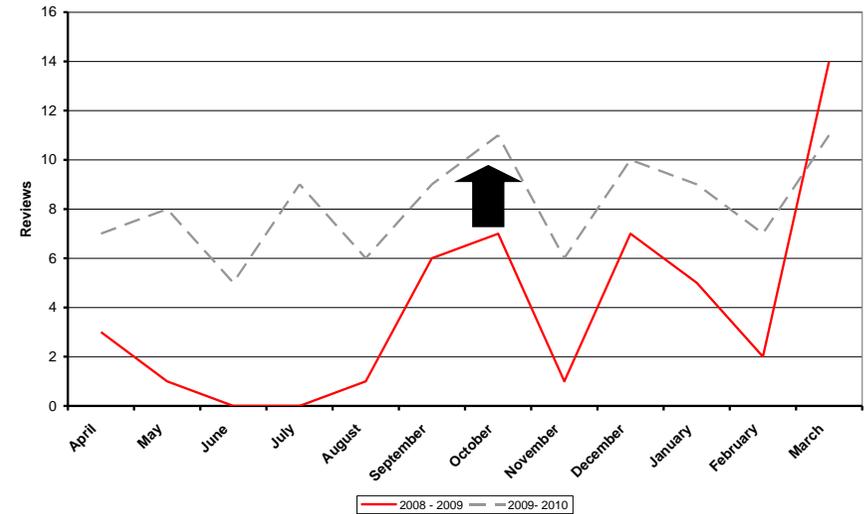
The result of Whizz-Kidz involvement is clear from data that tracks reasons for visiting the clinics...

...assessments fall in every month in the second year compared to the first as the backlog is cleared...



There are **fewer assessments** in the second year of Whizz-Kidz involvement because they have cleared the back-log of cases.

...the reviews of existing cases are higher thereafter.

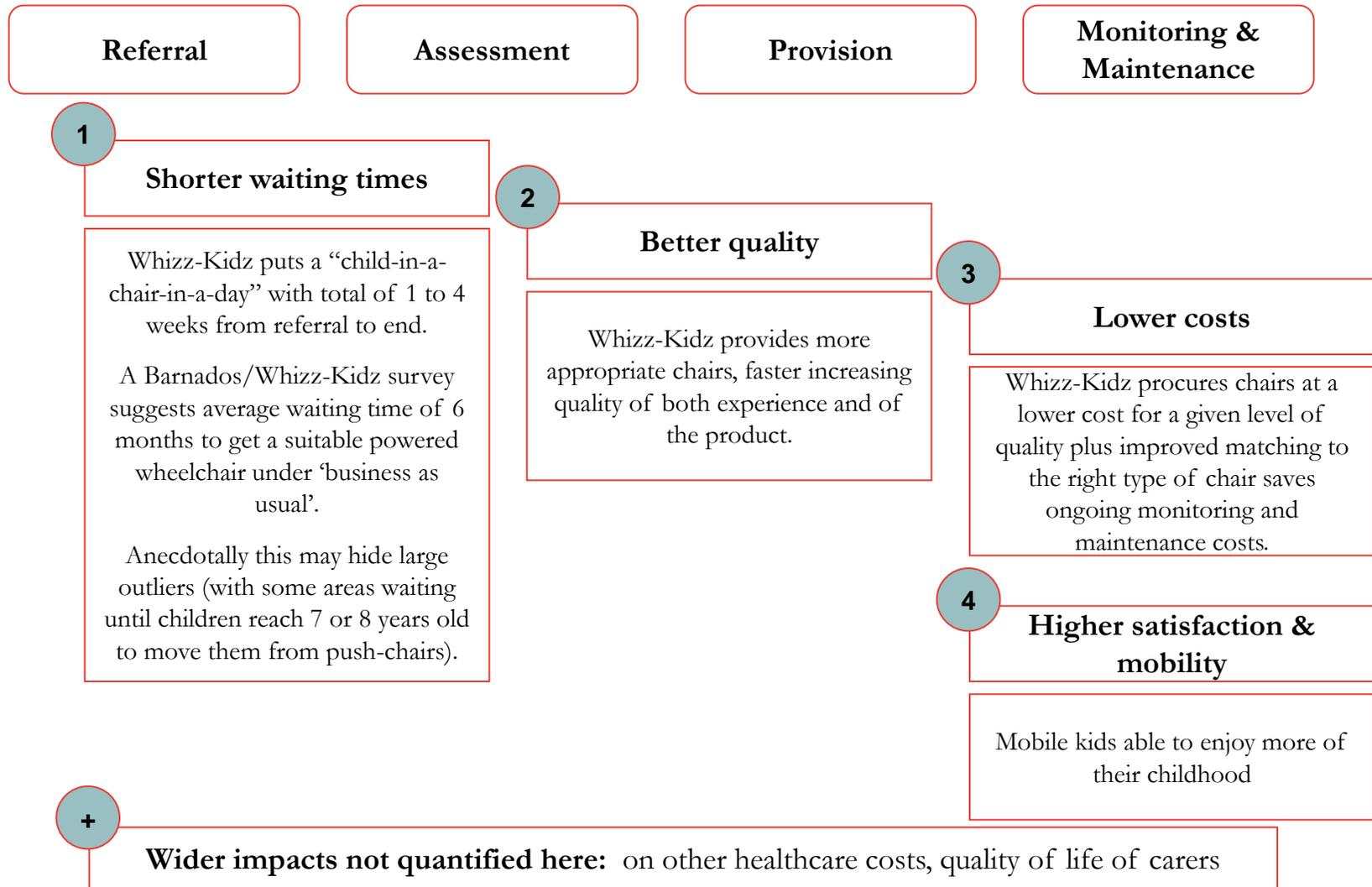


From the second year onwards there are **more reviews** for children with chairs – with Whizz-Kidz’ ‘check –up’ process intended to improve their effectiveness.

Source: based on NHS Tower Hamlets activity data for 2008-09 and 2009-10

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This process leads to four areas where there is quantitative evidence that Whizz-Kidz out-performs the “business-as-usual” situation. Improved value for money comes from the sum of all four areas, plus additional areas that are not quantified in this study.



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+

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Better quality and lower costs result in Whizz-Kidz providing wheelchairs in excess of 20% cheaper than a typical PCT.

| | Whizz-Kidz | Tower Hamlets |
|-----------------------------------|---------------|---------------|
| Annual cost | £240,000 | £185,577 |
| <i>Staff</i> | £90,000 | £108,000 |
| <i>Equipment</i> | £150,000 | £77,577 |
| Approx. annual users seen | 300 | 85 |
| Approx. annual wheelchairs issued | 205 | 73 |
| Cost per user | £800 | £2,183 |
| Cost per wheelchair issued | £1,171 | £2,542 |

Sources: "A partnership Project between Whizz-Kidz and Tower Hamlets Primary Care Trust", Charities Evaluation Service, January 2010; TH and WK budgets for service; "Tower Hamlets Activity Analysis"; Frontier assumptions from WK discussions about required administrative support and chairs issued before WK involvement.

The improvement in service also means Whizz-Kidz tend to supply a greater number of wheelchairs and a higher quality service and chair, which is not fully reflected in the numbers.

Shorter waiting times significantly improve quality of life – and would more than justify meeting existing “unmet demand” if NICE criteria were applied to this area.

Whizz-Kidz’ faster and better quality service means they reduce waiting lists and provide higher quality chairs. These benefits are on top of the lower costs of provision documented on the previous page. To value these benefits we compare the improvements in quality of life (using the standard Quality Adjusted Life Years – QALYs) that result from shorter waiting and better chairs with the standard threshold about society’s willingness to pay for such improvements.

| | Pre Whizz Kidz | Post Whizz Kidz | Unmet need |
|---|----------------|-----------------|--------------------|
| Wheelchairs issued | 73 | 205 | 132 |
| Waiting time for a wheelchair (months) | 6 | 1 | 5 |
| Total additional waiting time Pre Whizz Kidz (months) | | | 660 |
| Total additional waiting time Pre Whizz Kidz (years) | | | 55 |
| Gain in QALY per 1 year reduction in waiting time | | | 0.15 - 0.2 |
| Total gain in QALYS from reduced waiting | | | 8.3 – 11.6 |
| | | | |
| Approx. annual powered wheelchairs issued (assumes Whizz Kidz serve all need) | 1 | 21 | 20 |
| QALY lost when manual supplied but powered required (per year) | | | 0.12 |
| Total gain in QALYS from supply of right chair | | | 2.4 |
| Total gain in QALYS : improved waiting time + supply of right chair | | | 10.7 – 14.0 |

Sources: NHS Scotland, 2006, “*Moving Forward Review of NHS Wheelchair and Seating Services in Scotland*”; Tengs & Wallace, 2000, “*One Thousand Health Related Quality-of-Life Estimates*”, *Medical Care*; “Tower Hamlets Activity Analysis”; Barnados/Whizz-Kidz Survey of waiting times.

In Tower Hamlets, meeting unmet demand cost an extra £108,000 and **delivered 11 - 14 additional quality adjusted life years (QALYs)**. This results in a cost per QALY of approx. £9,800 – £7,700 versus the NICE* threshold of £20,000 below which effective treatment would normally be accepted for use in the NHS.

*NICE: National Institute for Health and Clinical Excellence – the independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill health.

These estimates are likely to be conservative because they exclude a number of wider benefits including: savings to wider healthcare budgets, improved quality of life for carers.

Without a bespoke data collection exercise, it is inevitable that some outcomes will be difficult to measure. In this case, meetings and discussions with those involved suggest that lack of comparable data in two important areas likely means that we have under-estimated the net positive impact of Whizz-Kidz' involvement.

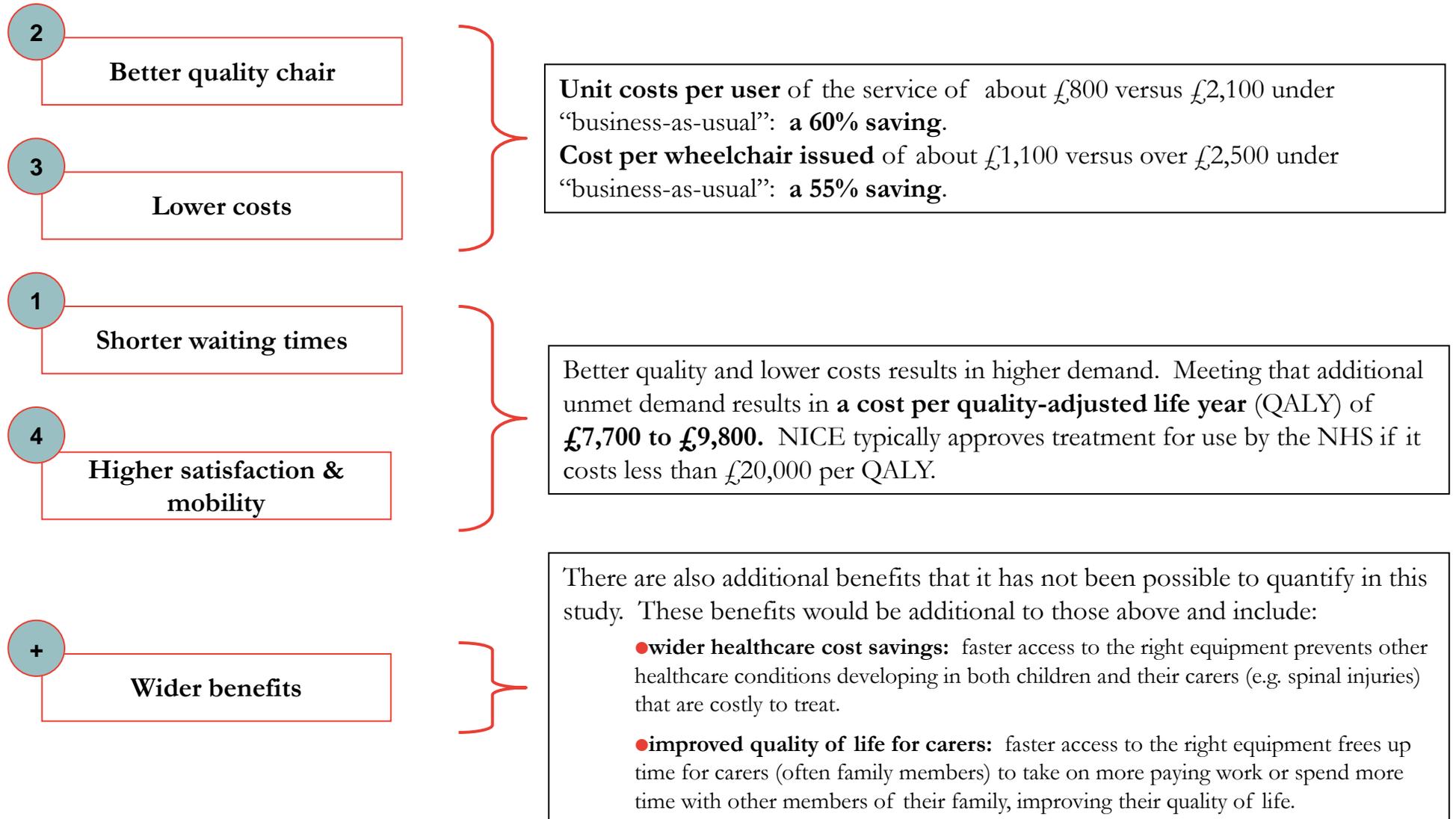
We have not been able to quantify two further positive benefits that would be additional to those that have been quantified:

- **Wider healthcare savings:** putting children into the right wheelchair quickly likely results in wider healthcare savings. Children in inappropriate wheelchairs or those waiting for a chair can develop spinal and other injuries that require subsequent, costly, NHS treatment. In addition, their carers (often their parents) can also suffer medical conditions (e.g. from having to carry and lift them more frequently than would be necessary if they had a proper chair). To the extent that these wider healthcare costs are avoided by getting children into the right chairs faster the involvement of Whizz-Kidz is linked to wider financial benefits to the NHS that free up local budgets to be spent elsewhere.
- **Impact on carers:** the greater freedom provided by getting children into the right wheelchair faster also frees up their carers, who are often family members. It improves their quality of life, allows them to take on more paying work to help support their family and devote more time to other members of their family. There has been little systematic attempt to quantify these types of impacts, despite a large qualitative literature about the impact on carers of improvements in the health of those they look after. Evidence from Dixon, Walker and Salek* suggests that for every 0.1 gain in patient quality of life, carers also gain 0.01 in their quality of life. However, the study emphasises that the result is subject to significant changes depending on the condition being considered and how quality of life is measured. It is clear that improved mobility for children would relieve carers of some responsibilities. A specific study would be required to quantify the impact for this case.

*: "Incorporating Carer Effects into Economic Evaluation", *Pharmacoeconomics*, 2006: 24(1).

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The analysis indicates that the involvement of Whizz-Kidz can offer significant improvements in value for money, as well as real financial savings.





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