

# Exploring new ways of using 4G technology within a community setting

EF-14

Jane Ritchie, Children and Young People's Occupational Therapist

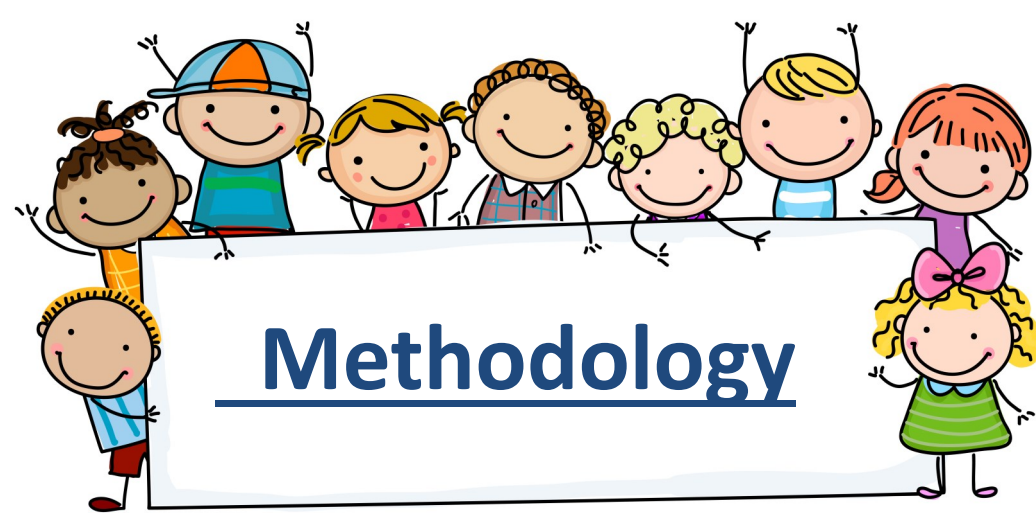


## Background

- I work in a small community based Children and Young People's Occupational Therapy Service team within East Ayrshire. We cover a reasonably large geographical area and work in children and young people's homes, nurseries, school and local communities.
- We were relocated to a new office base in 2018 within our locality area and we required access to computers as all of our patient notes are electronic. We are also a paperless service and all our requests for assistance, activity programme, assessments and communications are electronic.
- Our service is continuing to receive an increasing number of new requests for assistance which is adding to our existing waiting times.
- Our team is open to exploring new and innovative ways of working in order to decrease the amount of time that children/young people and their families wait to directly access our service.
- I have an interest in using technology and therefore applied to the NMAHP eHealth Leadership course (Cohort 10). I received a place on this course which enabled me to undertake this project as part of my final assignment.



- To pilot using 4G enabled laptops within my clinical area.
- To reduce time spent travelling within East Ayrshire to complete visits.
- To increase staff productivity.
- To provide staff with a better work/life balance.
- To provide pilot study data to share with other professionals on the benefits of using 4G technology within a community setting.



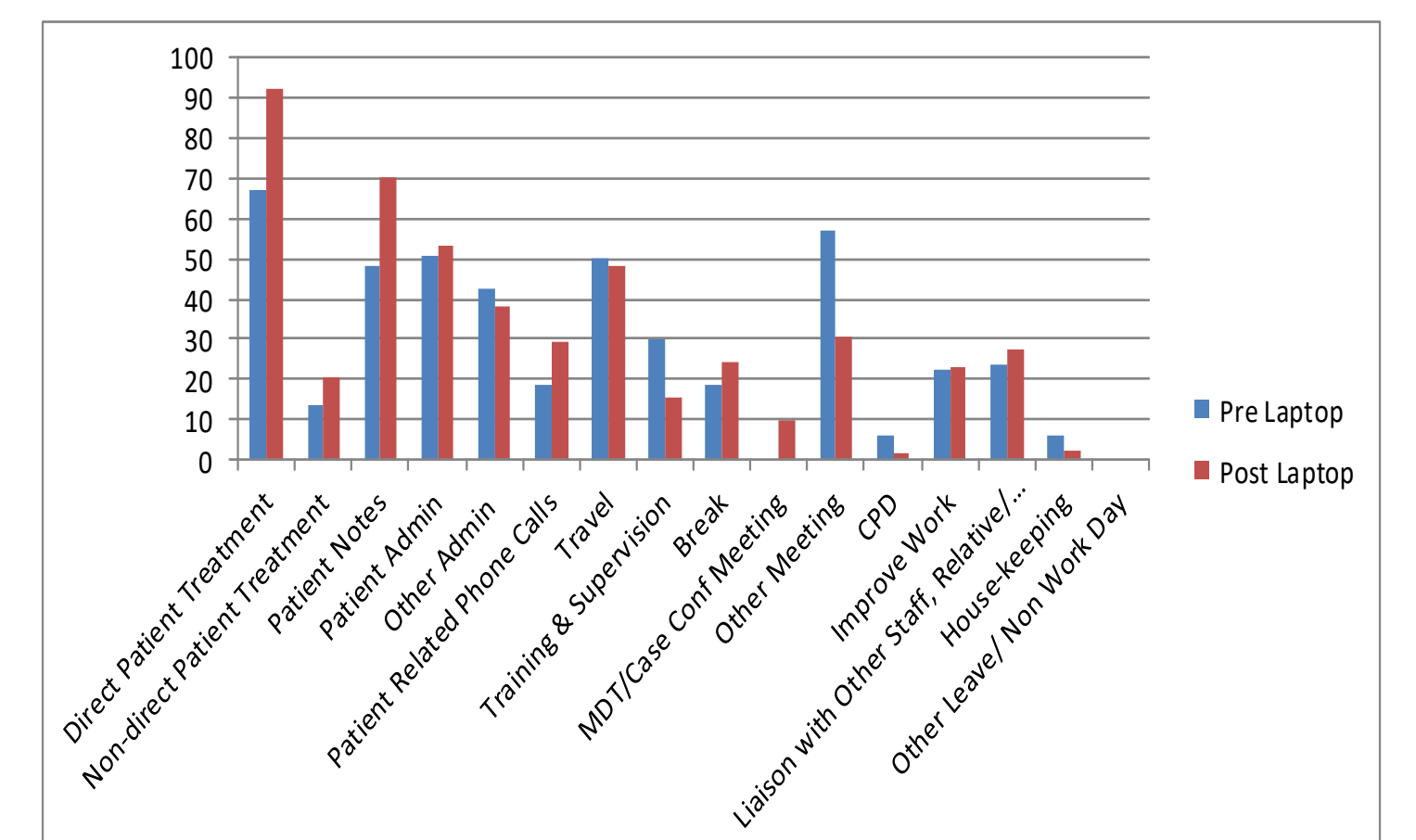
- I applied for a 4G laptop through our AHP Manager and provided a hypothesis as to why this equipment would be beneficial within my workplace. I also identified that I would like to complete a pilot project as part of my eHealth Leadership Programme using the 4G laptop.
- It did take a few months for the laptops to be supplied and set up for clinical use. The laptop uses a sim card and a Defender authentication code is required for access to the server when logging on out in the community.
- I completed time task analysis sheets for 6 weeks pre and 6 weeks post use of the 4G laptop within my working day.
- The time task analysis sheets were then analysed using an Excel spreadsheet to calculate the total time spent on each task. This data was then averaged across the 6 weeks pre and 6 weeks post laptop usage.
- Pie charts were generated to demonstrate how the breakdown on an average day changed following implementation of 4G laptop.

AMP - TASK ANALYSIS AUDIT	NAME	SHIFT PATTERN (EXCLUDING LUNCH)	DATE
1	Jane Ritchie	Mon - Fri 9am to 5pm	23.8.18
2	Team	Ther	
3	Location	Home	
4	Date	23.8.18	
5	Time	9am to 5pm	
6	Time	9am to 5pm	
7	Time	9am to 5pm	
8	Time	9am to 5pm	
9	Time	9am to 5pm	
10	Time	9am to 5pm	
11	Time	9am to 5pm	
12	Time	9am to 5pm	
13	Time	9am to 5pm	
14	Time	9am to 5pm	
15	Time	9am to 5pm	
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18	Time	9am to 5pm	
19	Time	9am to 5pm	
20	Time	9am to 5pm	

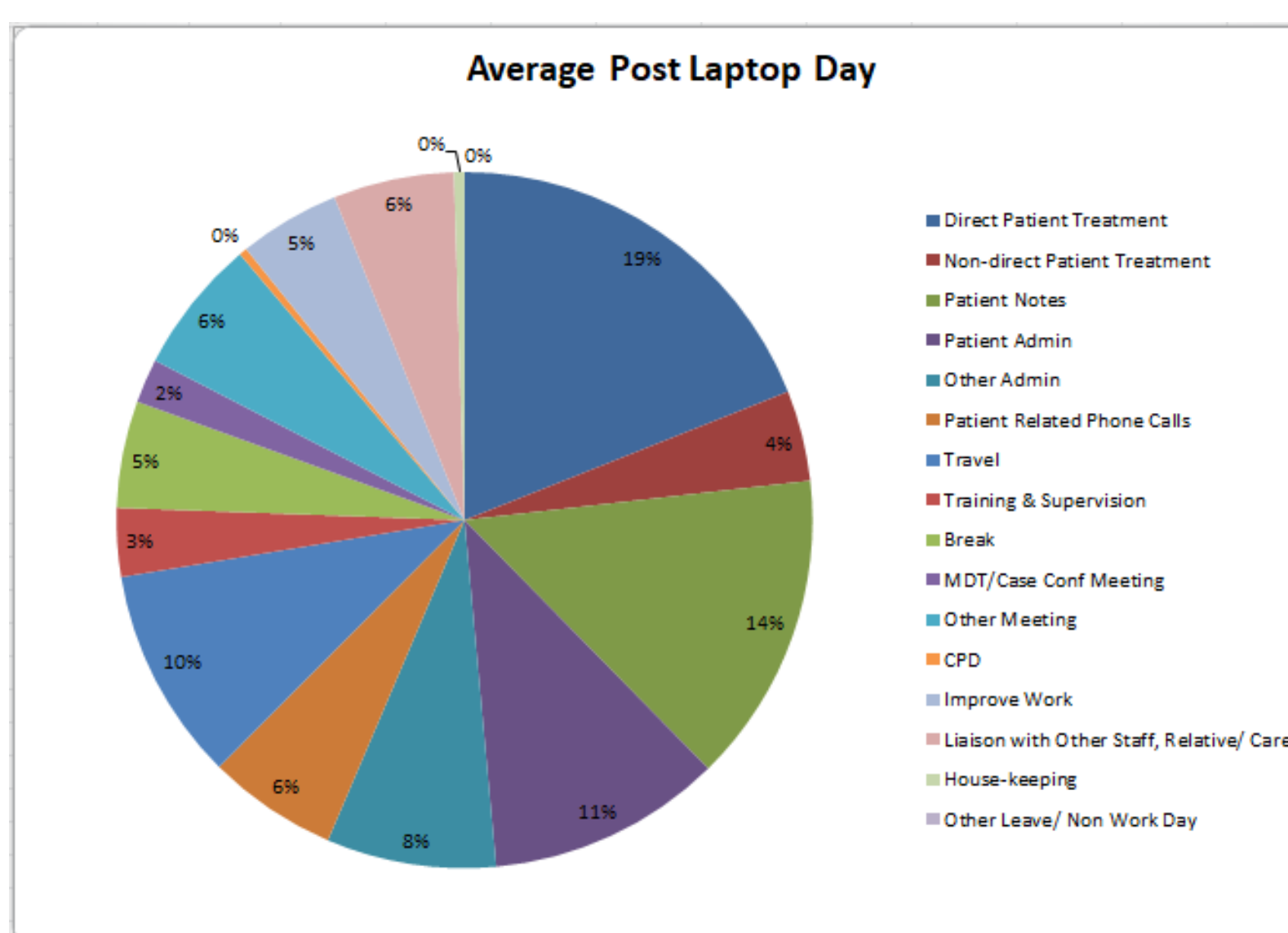
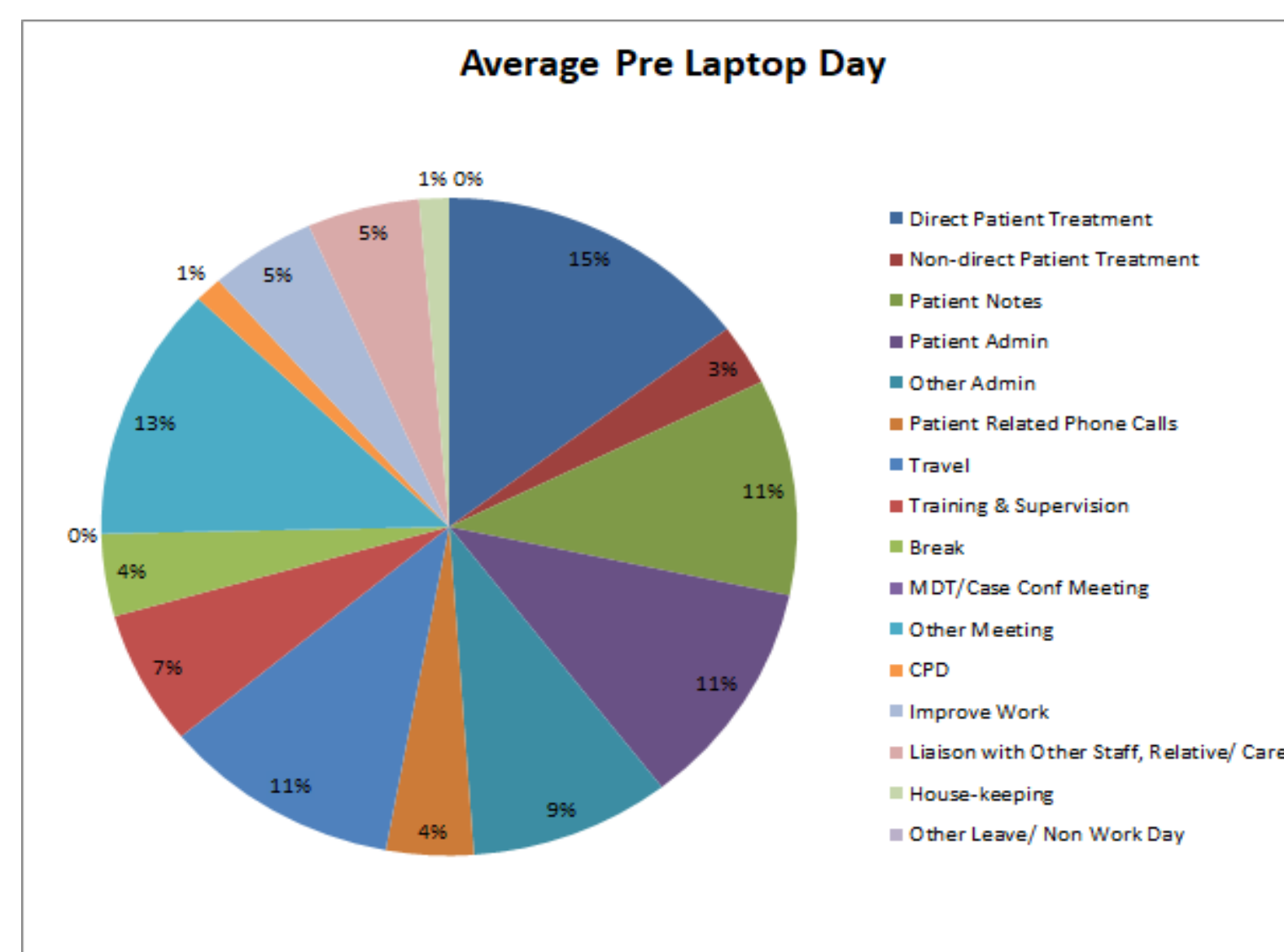
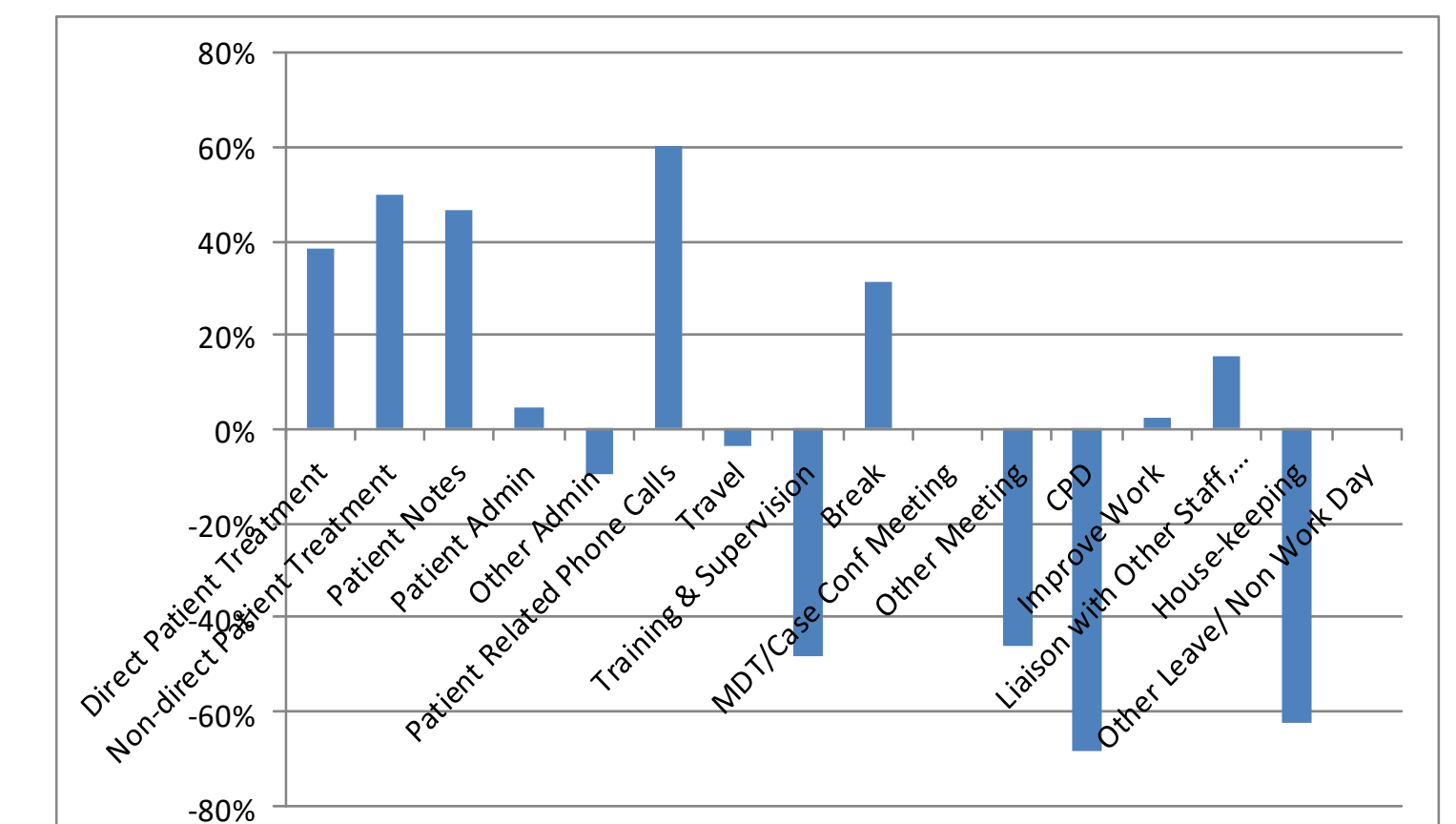
- The bar graphs were used to provide a direct comparison between the daily activities listed on the time tasks analysis as detailed in the graphic within this text box.
- Activity was measured within 5 minute periods throughout the day.



Average time spent per day (in minutes) pre and post laptop



Percentage change in activity pre and post laptop



- Over the 12 week period there was a 39% increase in direct patient treatment, a 50% increase in non-direct patient treatment, a 60% increase in patient related phone calls and a 46% increase in completion of patient notes following introduction of the 4G laptop.
- There was a 4% reduction in travel time, a 9% reduction in other admin and a 31% increase in breaks able to be taken by staff.

## Supporting the 2020 Vision for Healthcare in Scotland:

- This project supports the 2020 Vision for Healthcare in Scotland with particular emphasis on Quality of Care and Value and Financial Sustainability.
- The use of 4G laptops has enabled me to access electronic notes, emails, shared drives, activity programmes and websites within the community. This helps to provide a more efficient way of sharing relevant information with children/young people and their families. This has helped to reduce the amount of time I spend completing admin tasks such as printing and posting activity programmes, questionnaires and information sheets. This also saves money on printing and postage.
- It has also changed the way that I am communicating with families as I now predominantly use email and text. Following on from this, I have also helped to develop a website for our service and all of our leaflets are now online for people to access along with our contact numbers and request for assistance form.



- The introduction of the 4G laptop within my work place has increased my direct patient treatment time, my productivity and capacity to take designated breaks.
- However, this is a pilot study and further studies within similar disciplines would be beneficial in order to fully measure the potential impact of using this technology.
- Use of 4G is dependent on network coverage and there is not universal coverage within rural communities which would impact upon its success within these settings.
- The 4G laptop provides me with a more flexible work/life balance and enables me to address children and young people's needs more efficiently.