

Northern Care Alliance

An Economic Assessment to evaluate the
Bradford telemedicine service provided by
the Metabolic Medicine team at Salford
Royal Hospital



Telemedicine Clinic

Introduction

This Economic Assessment aims to review the telemedicine clinic that is provided as part of the metabolic medicine service at Salford Royal Foundation Trust (SRFT). The reader should treat this as practice based learning and it is a specific localised case study, however I would expect that this model could be applied to other services. The information provided is retrospective and is based on one service's experience of telemedicine.

Background

The Mark Holland Metabolic Unit at SRFT in Manchester is a designated specialist centre offering treatment and management for adult patients with inherited metabolic disorders. It provides services for the North of England but also accommodates patients from other geographical areas including Northern Ireland, Scotland and Wales.

The department provides diagnostic services, treatment, management, on-going care and support for patients with rare inherited metabolic diseases. These disorders can be broadly classified into General Metabolic Disorders and Lysosomal Storage Disorders.

Most of these conditions are multi-system disorders, which present with a complex clinical presentation. A multi-disciplinary team (MDT) approach is needed to provide the appropriate assessment and management. Within each disorder there are varying levels of severity from mild to severe, which can present as early as childhood, in adolescence or in later life. The conditions are predominantly grouped by their confirmed disease characteristics.

About 30% of these metabolic patients have some form of cognitive impairment due to the complexities of the illness and the way they affect the brain; this includes patients with learning disabilities.

Purpose of the Economic Assessment

The purpose of the Economic Assessment is to evaluate the telemedicine service provided at St. Luke's hospital in Bradford for patients with metabolic conditions, which is provided as an out-reach service from the main service at SRFT. The service aims to provide a routine follow up appointment with a dietitian and/or specialist nurse present with the patient and the consultant at Salford linking up via the video link. The groups targeted for this service are those deemed appropriate by their consultant, including those who have a learning disability, those patients who are unable to travel or find it difficult to travel long distances. As a result of this service there have been partnerships developed with the patient's G.P. local physicians, district nurses, community teams and palliative care teams, as more local care can be given. The delivery of this service is aimed at metabolic patients aged 16 and over. The economic assessment will provide service managers with the evidence that is required to continue to support this service for patients to access.

The focus of the economic assessment will be around the viability of the telemedicine service; this will determine if it is economically beneficial to the service and the NHS as a whole. With increasing demand in health care services and less resources being made available, we have to make better use of the current services and facilities in place. This model of telemedicine may be a concept that can translate to other services. To demonstrate the value of the telemedicine service four potential service models are described and their costs identified. Whilst all four models do not offer exactly the same level of service, for the purposes of this economic assessment they are deemed comparable, with the caveat that they are not identical.

Service design

The main service is provided at Salford Royal Hospital, this is a consultant led out-patient clinic with MDT input from dietitians, nurse specialists, physiotherapist, pharmacist and research practitioners as deemed appropriate. Due to the high number of metabolic patients living in the Bradford area, an out-reach service has been provided for a number of years; this clinic was attended by an adult consultant from SRFT only and took place in Bradford once a month with the paediatric dietitians and nurses supporting these patients. In 2013 it was decided by commissioners that this service was not economically viable or appropriate anymore and all patients needed to transfer to Salford Royal hospital and attend there for future appointments. This caused issues with the patients and they campaigned for the clinic to be reinstated. It was recognised that the adult metabolic patient cohort in Bradford had very specific clinical needs and travelling during the winter months to Salford was problematic. This combined with travel time (approximately 1-2 hours depending on traffic by car and 2-3 hours by public transport) and the cost of using public transport made attending appointments for some patients difficult (Bleakley et al, 2015). Other options needed to be considered.

In 2014 it was discussed within the metabolic team that one of the challenges facing the service was a limited budget with an increasing population of rare conditions and a service with a large geographic spread. This is a problem in sparsely populated countries across the world, Australia being one of them and telemedicine is being used in the healthcare system to address this issue (Vladzmyrskyy, Jordanova & Lievens, 2017)

The clinical lead for the service believed that one of the options to support the changing needs of the patients within financial restraints would be the improved use and implementation of healthcare technologies such as telemedicine. This would allow healthcare professionals to provide patient care from a remote location allowing patients to receive care from the metabolic team closer to home. The aim was to provide a better patient experience and reduce inefficiencies by reducing health inequalities and preventing unnecessary cost (Bleakley et al, 2015). However it was recognised that there would be some limitations in the service that could be provided.

Technology used by other NHS trusts were investigated by the team to explore what options there were out there already being used in order to manage their patients remotely; this included Airedale hospital. The system they used provided remote, secure and encrypted video consultations between clinicians and patients for diagnosis, review, assessments and interventions to minimise the severity of a patient's condition, deal with deterioration, assess future care needs or provide routine out-patient and follow up services. This was used within a variety of settings including the patient's home, preventing an out-patient hospital visit and reducing emergency admissions (Leading Change, Adding Value, 2016). It has been reported that having a remote consultation with a healthcare professional using the telephone or online technology can offer a much more convenient way of accessing NHS services (NHS, 2011). It was then discussed how the service would work and whether a consultant needed to be present on site with the patients.

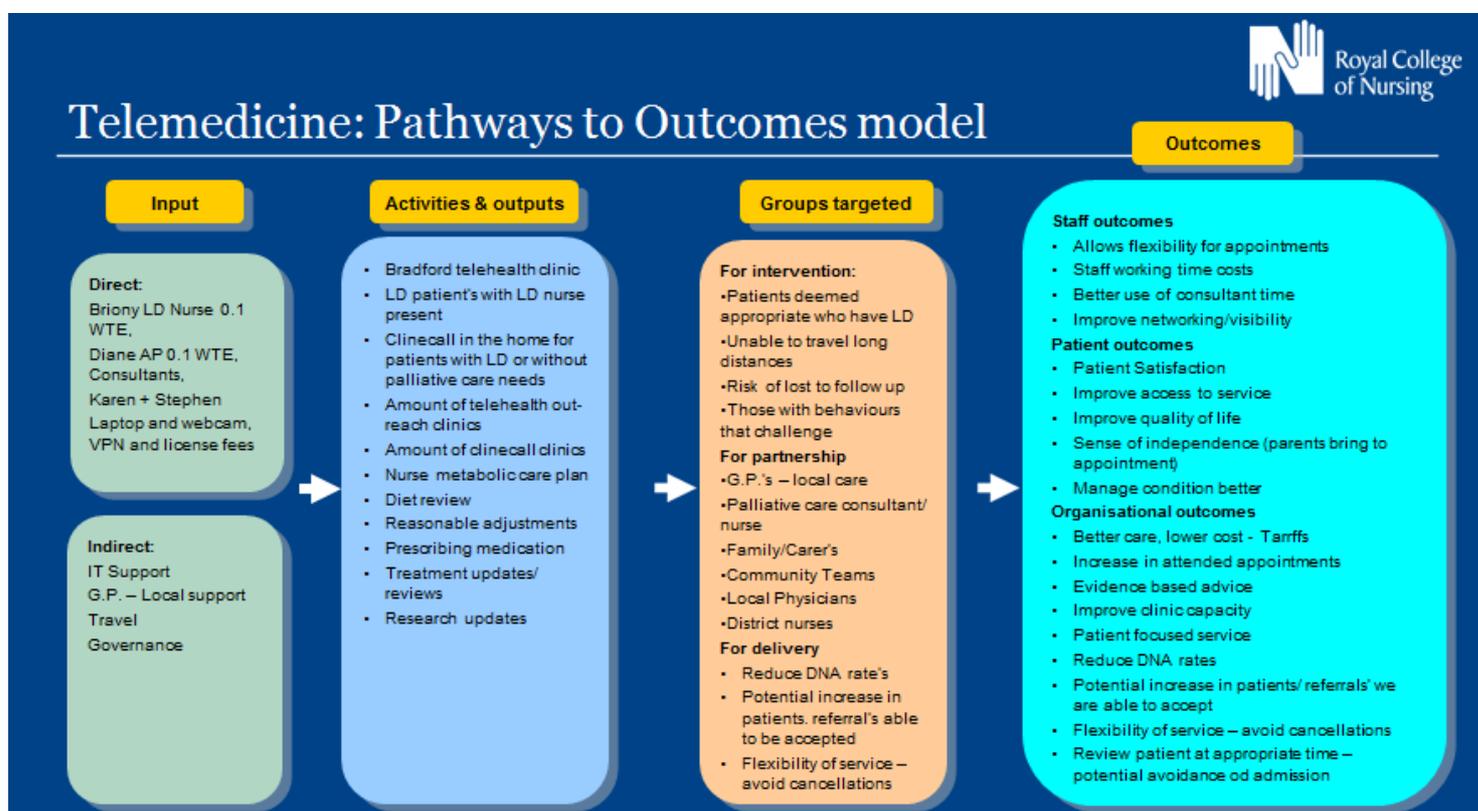
With this model in mind, the technology was explored and it was decided that a telehealth service could be provided and with agreement from managers and commissioner this was set up in 2014. In order to ensure all areas of governance were met, the team needed support from the trusts information management & technology (IM&T) services to ensure the link was secure, encrypted and able to work over a Wi-Fi network. Permission was also needed from the governance lead. We also needed to ensure that the metabolic team was able to maintain and establish professional relationships with the hospital in Bradford, which we felt required the metabolic dietitian and specialist nurse to physically attend the clinic. This allowed us to take the secure video conferencing equipment with us to allow a video link into the specialist centre. The dietitian has since qualified as an advanced practitioner therefore in this capacity she will be supporting the clinic and this is reflected in the figures. As a consultant was not physically in the consultations, physical examinations were not carried out but routine blood and urine test could be done. However we had to ensure patient expectations were managed, so patients were informed about

the new clinic, information about the services that would be offered in the telemedicine clinic and were given a choice on whether they wanted to attend an appointment at the local telemedicine clinic or be seen at the specialist unit at Salford Royal hospital. However, if the patient required any investigations (MRI, Bone density, 24 hr tapes, and physical examination) which can't be arranged locally or joint appointments with other specialties the patients had to attend the specialist unit. Patients are screened before being offered a telemedicine appointment, ensuring the telemedicine clinic consultation will meet their specific needs.

Outcomes

The Pathways to Outcome (PtO) model has been completed in order to map out the service (*figure 1*); this model allows the complexities of the service innovation to be presented in a clear and concise way (McMahon & Hoong Sin, 2015). It shows the inputs required both direct and indirect, mainly about the staffing of the service. The outcomes are broken up into different sub heading so that staff, patient and organisational outcomes are listed.

Figure 1



Key costs

The costs have all been provided by the departmental business manager in conjunction with the Trust finance team. Full economic costs are presented and where necessary adjusted to 2018 prices. The set up costs of telemedicine for direct and indirect have been identified (*see appendix 1*). 20% add on costs have been used as this is the figure quoted by the trust. The services that are outside of metabolic medicine were difficult to monetise, that is, the indirect costs, as I don't have access to this information. Although particularly for the governance aspect I would expect that this would have needed to be approved in a clinical reference governance meeting with senior people from the trust involved.

The running costs of the telemedicine service have been identified based on the year 2018 and the current service that is provided (*see appendix 2*). A summary of the costs for the telemedicine clinic including income from clinic appointments, compared to Bradford clinic with a consultant present, which would result in 2 programmed activities (PA's) are listed below (*figure 2*). The Bradford telehealth service would include a nurse and advanced practitioner attending the clinic with the consultant linked in via video-link, figure 2 compares the costs if the consultant were to physically attend the out-reach clinic in Bradford; this reflects the financial benefits of having the service set up as a telemedicine service. The difference in the costs is reflected in the template.

Figure 2 Bradford Telehealth compared to Bradford Consultant clinic costs and benefits

Per clinic	Bradford telehealth	Bradford Consultant attendance
License Fee	£100	N/a
Replacement of equipment	£84	£84
Advanced Practitioner	£434.69	£434.69
Specialist Nurse	£306.61	£306.61
Consultant	1 PA: £863.69	2 PA: £1727.38
Administration support	£183.33	£183.33
Car Park	£16	£24
Mileage AP	£36.90	£36.90
Mileage Nurse	£36.90	£36.90
Mileage consultant	N/a	£36.90
Clinic room/phlebotomy	£200	£200
Total Cost per clinic	£2262.12	£3070.71
Income from clinic tariff	£4370	£3438
Difference ie: net benefit per clinic	£2107.88	£365.29

Model 1: Bradford Telehealth

Income - Clinic slots:

Bradford telehealth: 8 appointments per clinic for – 2 new slots per clinic (£1574) and 6 follow up slots (£2796) - Total: £4370

Difference: £4370 - £2262.12 = **£2107.88**

NB: This does include the potential loss of income avoided by freeing up the Consultant capacity to run an additional clinic in Salford (see Model 2 below).

Model 2: Bradford Consultant attendance

Income - Clinic slots: Bradford telehealth: 6/clinic for – 2 new slots per clinic (£1574) and 4 follow up slots (£1864) - Total: £3438

Difference: £3438 - £3075.71 = **£362.29**

By sending the consultant to physically do the clinic it decreases the amount of clinic appointments that could be done, so there could only be 6 slots per clinic, instead on 8 slots; these cost have been calculated (see appendix 3). By the consultant physically attending Bradford the telemedicine equipment license is not needed as the programme won't be used, however the laptop will still be needed to access patient's notes. Also, by the consultant travelling there is the additional cost of their parking and mileage, as well as the fact that due to travel time it will be classed as 2 PA's meaning that 2 clinics are cancelled at SRFT instead of just 1. This could mean a potential loss of income of £2584.

Salford Royal Clinic

It is difficult to compare SRFT clinic directly with the Bradford service as the Bradford service is currently only 1 clinic per month, whereas at SRFT there are 14 clinics per week and this is between 4 consultants. It wouldn't be an accurate assessment as they are not like for like services so it would not be a direct comparison. However what is important to note is that the tariff is different for an on-site clinic and there are less slots. A clinic at SRFT would be 6 slots per clinic – 2 new slots per clinic (£1248) and 4 follow up slots (£1336) giving a total income of £2584. The clinic provided at Salford Royal is a complete MDT clinic with a physiotherapist, pharmacist and research team, where appropriate but these services can't be accessed at the Bradford telehealth clinic.

However Did Not Attend (DNA) rate is 16% - therefore loss of income for one slot would be £334, on average in a clinic at SRFT there would be 1 DNA per clinic, meaning that just looking at tariff income for that clinic would be £2250 compared to £4370 from Bradford telemedicine. It is important to note that is just income and does not take into account direct or indirect costs.

There is a potential for further efficiencies to be realised by the advanced practitioner doing the clinic with the nurse support without the consultant input. This would release 4 hours of a consultant time for clinical activity and would allow a clinic to take place at Salford Royal in addition to the Bradford telehealth clinic, which with a clinic of 6 patients could potential bring in an additional income of £2584 amount.

Model 3: Advanced Practitioner Led Clinic

Figure 3: Advanced Practitioner Led Clinic costs and benefits

Per clinic	Bradford telehealth
License Fee	£100

Replacement of equipment	£84
Advanced Practitioner	£434.69
Specialist Nurse	£306.61
Administration support	£183.33
Car Park	£16
Mileage AP	£36.90
Mileage Nurse	£36.90
Clinic room/phlebotomy	£200
Total Cost per clinic	£1431.43
Income from clinic tariff	£3728
Net benefit	£2296.57

The tariff for a new patient differs between the consultant carrying out the consultation and the advanced practitioner, whereas the tariffs for follow up appointments are the same; this has been determined by commissioners.

Model 4: Two Telehealth clinics per day / 24 per year

The demand for the Bradford service is increasing with more patients wanting to access the telemedicine service and more patients transferring from the paediatric centre. Therefore, there is another option that could be considered, currently the service is provided in an afternoon, if there was room availability at Bradford to provide a clinic in the morning as well then this would mean that a full day clinic could take place. This could mean increasing to 24 clinics per year but with 2 clinics on the same day, you would have same costs for mileage and parking, the license fee would be reduced per clinic. If there were 24 clinics a year instead of 12 then the costs would be reduced as the yearly costs are divided by 24 (*figure 4*). The clinic room isn't charged on a yearly basis, it is charged per clinic, so that cost would double up. The staffing costs would be increased as you would be using up double the amount of the staff time and 2 consultants PA's.

Figure 4 :Two Telehealth clinics per day costs and benefits

Per all day clinic	Bradford telehealth all day clinic
License Fee	£100
Replacement of equipment	£84
Advanced Practitioner	£869.38
Specialist Nurse	£613.22
Consultant	£1727.38 - 2PA's
Administration support	£366.66

Car Park	£16
Mileage AP	£36.90
Mileage Nurse	£36.90
Clinic room/phlebotomy	£400
Total Cost	£4250.44
Income from clinic tariff	£8740
Net benefit	£4489.56

This therefore shows that it would be economically viable to carry out a whole day clinic in Bradford, as the team is already there so travel costs and parking has already been paid for; so this would avoid additional costs of travelling to do separate clinics. In addition it takes 2 hours travelling time per person to get to Bradford and back, therefore 2 hours of a nurse time is recouped and 2 hours of the advanced practitioner time. It is not normal practice to carry out 2 clinics in one day, however due to how efficient the clinic can be run the team involved feel that they could manage this clinic. Although this would take up more of the consultant's time doing this clinic, which would mean that other non-clinical duties would need to be relooked at.

Benefits

There are a number of benefits to the patients, the staff and the organisation; some of these benefits can be monetised to show the financial implications of the benefit more easily than others. Qualitative benefits can be evidenced through other routes such as patient satisfaction surveys.

- 1. Improve patient's quality of life** – The service will be provided closer to their home, patients will receive the care and support that they require in order to manage their condition. Patients care is the priority and their quality of life is the main reason for this telehealth service. Through SRFT's patient satisfaction survey that took place in May 2017 patients felt that they saved money by having their appointment via telehealth, they had no issues using the technology and they were happy to have a telehealth consultation in the future.
- 2. Reduce DNA rates** - Patients who live in Bradford would not need to travel too far to be reviewed by a metabolic consultant. DNA rates are high within the service particularly for the Bradford cohort, by providing a clinic local to them we aim to reduce DNA rates and in turn save the NHS money. The current DNA rate for patients attending Salford is 16%, compared to Bradford where it is currently 5%. Each DNA at Salford would mean that there would be a loss of income to the trust of £334.
- 3. Improve access to service** - High risk pregnant patients can be monitored more closely, as the local clinic will be more accessible for them. There are currently 2 metabolic patients who are pregnant and require monthly follow up, which they access via the telehealth service. This allows for close monitoring of their metabolic condition. Due to the shorter distance needing to travel people with learning disabilities will be able to access this service better.

- 4. Promote patient independence** - Patients become more actively involved in the consultation as the consultant isn't physically in the room. As the venue is closer to their home, they could potentially travel to the appointment independently. By developing patient independence we are supporting them to take more control of their health. Fewer reviews would be needed if the patient is more independent, follow up appointments could be 12 monthly. This is evidenced in the patient satisfaction results from May 2017 where patients stated that they felt confident to take their medication safely following their appointment. By supporting people with learning disabilities to develop their independence with the use of technology benefits to the patient can be seen including reducing costs as they require less support (Fry, 2016).
- 5. Allows flexibility of appointments** - If a patient cancels an appointment at SRFT due to transport issues, they could potentially access the Bradford service. Reasonable adjustments are able to be put in place for learning disability patients; as they are booked at the start of the clinic, so that they attend clinic when it is quieter and can be seen quickly without a delay. This may stop a DNA from happening as reasonable adjustments have been put in place in line with SRFT's reasonable adjustment policy. Each DNA at Salford would mean that there would be a loss of income to the trust of £334. However if these patients were offered an appointment at Bradford instead so that they would be closer to home then this would generate an income of £466.
- 6. Improve clinic capacity** - The appointment time would be shorter allowing for more slots on the clinic and due to the limited number of clinics provided they would be fully utilised. Important to show the clinics are utilised well, this would allow more space in clinic for new referral's that must be booked into clinic within 2-4 weeks of being received. For the Bradford tele-health clinics there are 8 appointments slot, which would generate an income of £2021. There is an increase in demand for the service and this would mean that more slots are required at Bradford, which would create more available slots at Salford.
- 7. Reduce patient complaints** – A high number of complaints were received originally when the Bradford service was closed and this took a lot of the manager's time to investigate. Since the Bradford telehealth service has begun there have no formal complaints from patients regarding the lack of service for Bradford patients.
- 8. Increase in capacity to accept referrals** - As patients who are unable to travel long distances to appointments could access a service closer to home. On average the department receives 18 new referrals per month; if more referrals were able to be accepted then this could generate additional income of at least £787 (ie: one new patient).
- 9. Review patient at appropriate time** – Metabolic patients often become unwell at home and have emergency regimes that they follow; they often require an emergency blood test to check certain blood levels that can only be done in a hospital setting due to the blood sample needing to be taken to the laboratory for processing within half an hour. This could be done in the telemedicine clinic and clinical advice given, which may avoid a hospital admission. Over a 12 month period an audit was carried out within the team from June 2015 to May 2016 and 89 inpatient admissions were recorded, out of these 16 admissions were planned. In Bradford there were 2 planned admissions and 13 unplanned admissions to hospital.
- 10. Improve networking/ visibility** - Closer working relationships with Bradford teams, especially with the specialist nurse and dietitian on site for the clinic.

Telehealth in Practice

We currently provide a monthly telemedicine service in Bradford, where the advanced practitioner and nurse carry out a clinic with the patient in St. Luke's hospital in Bradford and the consultant links in via a video link. Patients are selected by their consultant for this clinic as it isn't suitable for all patients, as a physical examination is not carried out by the doctor at the consultation as this isn't required at all appointments this method of clinic was deemed suitable for this cohort of patients.

A large proportion of SRFT's metabolic patients live in Bradford and within the surrounding areas. There are currently 164 out of 1182 patients accessing the Bradford telehealth service. About 40% of these Bradford patients have a learning disability but may not all be suitable to access this service; this is determined on an individual basis by the consultant and learning disability nurse. They have an improved quality of life as a result as they are able to access a service close to home with little travel that doesn't disrupt their routine too much or take over their whole day. It has been proven in healthcare settings that telemedicine is an appropriate tool to be used for patients with learning disabilities and it improves access to services (Temple, Drummond, Valiquette, & Jozsvai, 2010).

The telemedicine clinic is managed by the administrator at SRFT; this is a major advantage as the patients with learning disabilities can be identified appropriately from the waiting lists and slotted into the clinic at the right time. This allows a person centred service to be provided to the individuals accessing the clinics; person centre care is key for patients with learning disabilities and technology is helping this to develop further (Jones-berry, 2017).

From a recent clinic the metabolic specialist nurse who is trained in learning disabilities attended the clinic with the advanced practitioner, as there were 2 patients with learning disabilities booked into the clinic. The first patient attended at the start of the clinic, as he needed a short waiting time as a reasonable adjustment, he came with his family and his community learning disability nurse was also able to attend due to the close location. This enabled her to update the metabolic team on what she is working on with him. The appointment lasted for 30 minutes and it was agreed that blood tests would be done at the day centre by the nurses who visits him regularly. Telemedicine enabled him to be reviewed by a consultant, which allowed appropriate management advice to be given and actions in the community to take place.

Patient's views

The family commented that

'the clinic was very efficient, we were seen upon arrival to the clinic and the consultation didn't take too long. We were pleased that we could access our local hospital, as it is a small community hospital so our brother doesn't get as worried'.

They also commented on the small amount of time it had taken out of their day compared to if they had travelled to Salford;

'I would have had to take a full days holiday from work due to the long distance and trying to avoid traffic, whereas today only a couple of hours was needed and he's been able to go to his day centre this morning so all round very pleased'.

The other patient attended at the end of the clinic so that he didn't miss his day centre at all and his dad could bring him after he had finished work;

'this time of appointment wouldn't have been possible at Salford for us, as we would have got stuck in tea time traffic on the way home and he doesn't like being in the car for too long'.

If he would have been unable to attend the day centre then they would have lost out on income of £77 for him, he doesn't need additional staffing, so the staff would have already been in place (*Unit costs of health and social care, 2017*). He has a metabolic condition where there is no treatment currently; it is a neurological progressive disease, with our team's input being supportive management. He is under a local neurologist who along with the epilepsy nurses provides regular input to his care. Due to the rarity of his metabolic condition it is important that he remains under the care of the metabolic team, as appropriate advice can be given to professionals who aren't familiar with it. He has had a few hospital admissions recently whereby our team has been contacted for advice quite soon after admission, which allowed our consultants to explain the condition and to advise the team to manage as you would any other patient; this ensured that the treatment was given without unnecessary delay; which is crucial to avoid preventable deaths (Heslop, Blair, Fleming, Hoghton, Marriott & Russ, 2013). His dad also commented on the joint working between the neurology team and the metabolic team;

'it's good to know that they can call upon each other for specific advice, meaning that I can be his parent and not need to try to give the medical advice'.

Health Professional views

The metabolic team have found that telemedicine works for this cohort of patients but have been clear that patient selection is essential, the dietitian reported

'there have been patients where it hasn't worked for, for example we needed an interpreter for a patient, as we can't access a face to face service in Bradford we needed to use telephone interpreting, which then became a 3 way confusing conversation for the consultant on the video link, as they couldn't hear the phone so the dietitian needed to relay the information to the consultant; this patient has been advised that they need to access Salford Royal for future appointments.'

The learning disability nurse reported that

'this service is brilliant for patients with learning disabilities, as they can access a service closer to their home and with some reasonable adjustments put in place a successful consultation can take place.'

As the service is becoming more known, patients are requesting access to this service; in particular the community learning disability in Bradford often request patients to be reviewed by this set up as they know how difficult it can be to get to clinic in Salford.

Conclusion

In this report 4 models of potential service delivery have been described and their costs considered against the tariff income realised by the Trust. Telemedicine is working for this specific cohort of patients, the patient response to this has been positive and for the majority of patients the clinic works very well, however patient selection into the clinics is essential. It is not a complete service, as patients can't access the team's physio, research team or pharmacist directly in the consultation; however follow up work can be done after the appointment. Furthermore this successful model raises considerable opportunities for telehealth to be applied to other specialist services or non-specialist care where physical observations/ testing aren't indicated. On a trust level this model of care could be utilised in other areas specialities.

Recommendations

- Telemedicine service in Bradford to continue
- Specialist nurse and dietitian to continue to physically attend Bradford
- Patients with learning disabilities to continue to access this service – support of community learning disabilities were involved to support
- Based on an increase demand for the service, an all-day clinic once a month could be explored
- Advanced practitioner to do Bradford clinic with the telemedicine as an option for accessing consultant support for more complex patients

References

C Bleakley, D Green, L Thompson, I Anand, S Kempshall, K Wynne, G Wilcox, A Jovanovic, R Sharma, CJ Hendriksz. (2015). Telemedicine – is this a safe, cost effective solution? Poster from BIMDG National Meeting.

Fry, D. (2016). Phone apps boost independence. Learning disability Practice

Heslop, P., Blair, P., Fleming, P., Hoghton, M., Marriott, A., & Russ, L. (2013). Confidential Inquiry into premature deaths of people with learning disabilities (CIPOLD)

Jones-Berry, S. (2017). Customised IT for a truly person-centred service. Learning Disability Practice.

McMahon, A., & Hoong Sin, C. (2015). A guide to economic assessment in nursing. Nursing Management. RCNi

National Health Service (2011) The Foundation programme, <http://www.foundationprogramme.nhs.uk/pages/home>

Temple, V., Drummond, C., Valiquette, S., & Jozsvai, E. (2010). A comparison of intellectual assessments over video conferencing and in-person for individuals with ID: preliminary data

Unit costs of health and special care, (2015). <https://www.pssru.ac.uk/pub/uc/uc2015/full.pdf> - *community nurse*

Unit costs of health and social care, (2017). <https://www.pssru.ac.uk/pub/uc/uc2017/services.pdf>

Vladzimirskyy, A., Jordanova, M., & Lievens, F. (2017). A Century of Telemedicine: *Curatio Sine Distantia et Tempora*. A World Wide Overview – Part I

Appendix 1

Salford | Oldham | Bury | Rochdale | North Manchester

RCN Demonstrating Value: Applying the principles of economic assessment in practice



2018	Set up costs			
Direct	Identify	Quantify	Monetise	Total
1.	Telehealth equipment	2 laptops, 2 webcams	£3310.55	£3310.55 + £60 + £707.56 Total: £4078.11
2.	Human Resources	Honorary Contract		
3.	SRFT electronic patient record access	Virtual Patient Network	£60 (inclusive of VAT)	
4.	Management Support	Support Manager – 1 week's work (187.5 hours)	+20% on costs £36793.20/annum - £707.56 for 1 week's work	
Indirect	Identify	Quantify	Monetise	
1.	Information Governance approval			
2.	IMT Support			
3.	IT access at Bradford			

1

Appendix 2

RCN Demonstrating Value: Applying the principles of economic assessment in practice



2018		Running costs - Telemedicine		
Direct	Identify	Quantify	Monetise	Total
1.	Telehealth programme	License fee	£1200/year - £100 per clinic	100 + 84 + 434.69 + 306.61 + 863.69 + 183.33 + 8 + 8 + 36.90 + 36.90 + 200 + 65 = £2327.12
2.	Replacement of equipment if broken	Replacement laptop	£1000 - £84/clinic	
3.	Staffing	Advanced Practitioner Band 8a 0.1WTE Nurse Band 6 0.1WTE Consultant 1PA 4 hrs	+20% on costs £52162.80/annum - £434.69/clinic +20% on costs £36793.20/annum - £306.61/clinic +20% on costs £103642.80/annum - £863.69/clinic	
4.	Admin support	Band 3 0.1WTE	£21999.60/annum - £183.33/clinic	
5.	Travel	Car park costs Mileage – Nurse 82 miles/clinic 984miles/year AP – 82 miles/clinic 984 miles/year	£8/person/clinic 0.45/mile - £442.80/year – £36.90/clinic/ person	
6.	Service Level Agreement	Clinic room Phlebotomy	£200/clinic	
Indirect	Identify	Quantify	Monetise	
1.	Patient Travel	Travel to clinic appointment		
2.	IT access at Bradford	Use of on-site computer		
3.	Community Nurses	Venepuncture of learning disability patients, nurse attendance at clinic appointments	£65/ hour of nurse time – on average 1 clinic per year	

Appendix 3

RCN Demonstrating Value: Applying the principles of economic assessment in practice



Template 5: Identify, quantify and monetise running costs

NAME: Briony McNelly

2018			
Running costs - Consultant			
Direct	Identify	Quantify	Monetise
1.	Replacement of equipment if broken	Replacement laptop	£1000 - £84/clinic
2.	Staffing	Advanced Practitioner Band 8a 0.1WTE Nurse Band 6 0.1WTE Consultant 2PA 4 hrs	+20% on costs £52162.80/annum - £434.69/clinic +20% on costs £36793.20/annum - £306.61/clinic +20% on costs £103642.80/annum - £863.69/clinic x 2 = £1727.38
3.	Admin support	Band 3 0.1WTE	£21999.60/annum - £183.33/clinic
4.	Travel	Car park costs Mileage – Nurse 82 miles/clinic 984miles/year AP – 82miles/clinic 984 miles/year Consultant – 82miles/clinic 984miles/year	£8/person/clinic Total: 24 0.45/mile - £442.80/year – £36.90/clinic/per person Total; £110.70
5.	Service Level Agreement	Clinic room Phlebotomy	£200/clinic
Indirect	Identify	Quantify	Monetise
1.	Patient Travel	Travel to clinic appointment	
2.	IT access at Bradford	Use of on-site computer	