

Learning from one renal unit's transformation in response to COVID-19

Key Authors

Stephanie Stringer, Helen Eddington, Miriam Berry, Jenny Pinney, Lavanya Kamesh and Peter Hewins

Context

The Covid-19 pandemic led to an unprecedented demand for NHS services while simultaneously reducing access to many other NHS services with major, novel challenges to healthcare providers attempting to keep services running safely. To meet these challenges it was clear from the outset that radical transformation was required across the renal service.

While some of these changes were very specific to the pandemic scenario, many others will shape the delivery of services beyond Covid-19. Here we present the beneficial changes in the areas of haemodialysis, in-patient care and medical staffing, outpatient care, peritoneal dialysis and renal transplantation.

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Haemodialysis

Authors: Stephanie Stringer, Annette Dodds, Anne-Marie Phythian, Lynette Groombridge and Gabby Hadley

In the period prior to the Covid-19 pandemic we were in the process of merging with another organization, this means that in addition to the substantial changes associated with managing covid-19 we were also managing a much larger HD service with historically different ways of working across sites. In many ways the necessity of a centralized and uniform service created by the demands of Covid-19 accelerated the integration of the two services and as a result we are now a far more unified service than previously. This is probably the greatest overall benefit to us but other, specific, beneficial changes are listed below.

Summary of beneficial changes:

- *New starters beginning HD at satellite units*
- *Incremental HD starts for new patients*
- *Management of staffing shortages: nurses who had previously worked in HD*
- *Management of staffing shortages: medical students and sexual health nurses to work as HCAs and DSW*
- *The use of technology to replace face to face activity in the satellite program*
- *The rapid production of Standard Operating Procedures, training documents and patient communication*

Rapid creation of in centre HD capacity for purposes of cohorting.

This was something that we had been trying to do for some time; it had previously proved very difficult to get patients out into the satellite program from the hub units mainly because of a combination of patient reluctance to move to a less supervised environment and mainly capacity in the satellite program. Covid-19 made both easier; patients felt that they would be much safer in the satellite program (at the very outset I walked round all the patients with the lead nurse and explained that soon the outpatient slots in centre would become cohort shifts with potentially infected patients). Patients were made aware that their move to a satellite unit would be a permanent one. We did retain a small number of in centre patients who were not suitable for transfer out (usually because they are medically too unstable or they require a bed for dialysis). We created satellite capacity in the following ways;

1. As soon as a patient from a satellite unit was admitted we used their slot (we would have previously waited for 2 weeks before releasing their slot)
2. We opened up twilight slots at two NHS units and expanded slots at another private provider unit
3. We instituted a policy of HD reduction for shielding purposes to 2x weekly for suitable patients. This created capacity though that was not the main aim of the policy
4. Sadly patient deaths also created satellite capacity

We plan to maintain this by keeping very close oversight of the in centre units, having clearer oversight of the satellite capacity and continuing to keep the extra slots open as required.

New starters beginning HD at satellite units

Prior to Covid-19 new dialysis starters almost always had their initial dialysis in centre and then moved to a satellite unit following this, the exception is the patients who were looked after by the Heartlands group who were able to start dialysis at one of their NHS satellite units. While there are advantages to beginning dialysis in centre (the presence of medical supervision and access to nurses with specialised cannulation skills) a major disadvantage of starting patients in centre is that it can become very difficult to move them out in a timely fashion which can result in the filling up of in centre capacity. We felt that it was important to unify this process and we did this in the following ways;

1. We discussed this with our private providers who were keen that we develop a formal pathway for this
2. We developed an SOP which stated that unless there is a specific indication to start in centre all patients will be assumed to be suitable for a satellite start

Incremental HD starts for new patients

Prior to Covid-19 we had discussed the use of incremental dialysis starts for new patients but had not managed to roll this out. At the outset of Covid-19 we decided that we would immediately commence this and we did so using the following process;

1. The CKD team were told that this was now how patients will be starting HD (unless there is a specific clinical request to start at thrice weekly)
2. Pre dialysis education (such as it was during the pandemic) was updated
3. The core HD coordination team ensured that patients who started HD after a hospital admission were assessed for their suitability for an incremental start by the Consultant discharging them
4. Patients starting in this way are all told that at some point a clinical decision will be made to increase their dialysis to thrice weekly

Centralised control of the HD program by a small team

During covid-10 the changes to inpatient rotas meant that the availability of the Consultant workforce to continue to provide medical supervision for their satellite units was radically reduced. This left a very small core of Consultants and specialist nurses to run the entire program, the satellite units were forced to manage with significantly less medical support than usual and in almost all

cases they did so. We ensured that the units all still had access to urgent medical support, weekly troubleshooting calls and monthly dialysis QAs (done remotely). We set up an email inbox for all HD queries so that they could be dealt with centrally. All of the monitoring of the twice weekly shielded patients was conducted by this group. This was a great deal of work but the program ran safely and efficiently during this time. While this was not a permanent change to our model of care the following aspects could persist;

1. Close coordination between the HD lead coordinators from the historic QE and Heartlands sites with management of program capacity
2. Regular update calls with the units from the HD leadership team
3. Ongoing support for the satellite units to practice in a safe but more autonomous way
4. We now know that in a similar situation it is possible to successfully run the program using this command and control model

Maintaining social distancing at dialysis units

To reduce the transmission of Covid-19 within dialysis units we encouraged the use of private rather than hospital transport, we reduced the use of waiting areas and staggered shift start times to avoid mixing of patients from different shifts.

Management of staffing shortages: nurses who had previously worked in HD

It was anticipated that Covid-19 was likely to bring significant staffing pressures, either as result of sickness or because of the need to support dialysis in other areas such as ITU. A great effort was made to support those nurses who had previously worked in HD to return safely. Some of these nurses (they were specialist nurses with an HD background) had been working in an HD environment prior to Covid-19 so no training or additional support was required, some had not worked in HD for some time. The following measures were put in place to make the most effective use of this valuable resource;

1. An urgent assessment of all the nurses in the organisation who had HD skills was made by the matron at the outset
2. They were approached and an assessment of their training needs was made
3. A structured process of support and assessment was put in place to ensure that that they were able to practice independently as quickly as possible
4. To maintain these skills they will all spend at least half a day a month in HD going forward

Management of staffing shortages: medical students and sexual health nurses to work as HCAs and DSW

We were able to utilise colleagues from the sexual health clinic and medical students to work at the dialysis units. They all had an initial induction and were taken on to the unit to practice lining and priming, all redeployed staff were given a competency document and a mentor/buddy to work with. The Home HD CNS team also regularly visited the support workers on the unit to support completion of the competency document. Informal feedback from both the dialysis teams and the staff themselves has been excellent. Although the teams were a little reluctant at first as it felt like extra pressure to train staff when they were already under pressure, they soon felt the benefit. We are

planning a formal evaluation initially with the medical students. We will keep the training documents up to date to ensure that should we need to roll out similar changes in future we can do so at pace.

The use of technology to replace face to face activity in the satellite program

The initial limited availability of clinical staff and the on-going need to reduce footfall at dialysis units to protect patients has driven a use of technology to provide care for our patients. We now use video conferencing technology for QA meetings, this is very time efficient (some of our units are located a long way from base and the travelling times were significant) and will work well in the long term. We have also introduced video and phone reviews in place of face to face reviews which enable staff to work remotely. An on-going issue is the need to sign paper dialysis prescriptions, we have overcome this by arranging for non patient transport to bring the prescriptions back to the hub in a secure document wallet where they are re-written by the HD coordinators and sent back on the same day.

The rate of production of SOPs/training documents and patient communication

During Covid-19 we needed to rapidly respond to a fast moving situation, this involved producing documents rapidly and communicating clearly and regularly with our patients. The core HD team were involved in this effort which resulted in a master SOP for managing Covid-19 in a dialysis program. The beneficial aspect of this is that we needed a unified HD SOP after the merger and this can now be based on the Covid-19 document. We wrote to our patients regularly and also used social media to communicate important messages.

Key messages

- It is possible to run a very large dialysis program with a very small team but this is not a long term option
- It is important to think about all parts of the haemodialysis process when managing social distancing
- You need to keep communicating with patients and staff
- You need to keep all your documentation up to date as things will change quickly

Useful links

[Protocol for patients starting haemodialysis](#)

[Haemodialysis training document](#)

Inpatient care, medical staffing and rota configuration

Authors: Jenny Pinney and Clare Pattenden

Summary of beneficial changes:

- *Rapid communication to maintain balance of work across inpatient areas*
- *Team 'bubble' approach to build morale and reduce cross staff sickness*
- *Continued change to the in-patient footprint to accommodate the differing case load and maintain in patient capacity*

In-patient footprint

Peak COVID crisis

- Merging of ward based areas to a larger in-patient footprint across specialties meant we could run three areas; a HOT COVID ward, a COLD area for our most vulnerable patients with well defined non COVID diagnoses, and an AMBER area with patients who were waiting for swab results, who did not present primarily with COVID symptoms but had some features of the disease.
- Dialysis provision for in-patients in the HOT ward and the AMBER area received dialysis at the bedside to avoid movement of patients.
- ?COVID patients were kept in side rooms. Patients were only cohorted into bays if they were either all COVID positive or all COVID negative. Patients who were swab negative but with a remaining clinical suspicion of COVID were kept in side rooms.

The post COVID phase

- As there is a low level of on-going COVID we continue to run a smaller HOT area which is a small section of a ward sealed off from the rest of the ward running independently with staff defined for that area and a different entrance/exit and drugs trolley/ staff room.
- Patients admitted with possible COVID are assessed in a defined room within the HOT area. The patient is rapidly moved without exposure to any other patients when the swab result and clinical assessment has deemed the patient should be moved to the non COVID area or moved within the COVID area if swab positive. Rapid testing has meant this process can now happen within hours.
- Patients admitted who are not suspected as COVID are assessed in the renal assessment unit in side rooms and triaged into an AMBER area or COLD area based on risk.

Staffing models

- At the outset of the pandemic we had approximately 25% of medical staff off sick with symptoms of COVID. This has reduced over time but there remains a low level of COVID related sickness.
- Medical staff were rapidly pooled into one much larger team to enable cross cover for sickness. The renal medical, renal surgical and vascular surgical departments contributed to pooled rotas. Academic staff were drafted in to support the service.
- Staff were asked to review the occupational health guidance for exposure and pooled into different areas. Medical staff at high risk were taken out of the in-patient service and provided support maintaining telephone clinics, low risk face to face out patient services for emergency review and advice and guidance for other trusts/ GP services.
- All in-patient facing staff were moved onto 4 days on/off 12 hour shifts. With a much greater consultant presence to support the junior staff and make rapid decisions to improve patient flow. The two staff groups operated as 'bubbles' to avoid cross contamination and reduce staff sickness.
- Some staff were re-deployed to other areas such as the Acute Medical Unit and critical care.
- We ran with extra capacity of doctors on the ward which meant sickness could be absorbed and people working in areas they are not accustomed to would have time to orientate.
- Two meetings per day were convened across the trust to discuss gaps in staffing and move medical staff into areas of greatest need.
- Annual leave initially was cancelled but as the pressure eased all staff were encouraged to take leave to rest however any 'lost' leave will be either carried forward or remunerated.
- Rapid communication was central to effective working. A WhatsApp group was set up for all the juniors working within the pooled rotas and was used as a way of recognising if certain areas of the service required extra support. Consultants in charge of rotas were in the group to be able to move staff around.
- A contacts sheet was also available so doctors could be contacted via their mobile phone to allocate staff to the different areas.
- During peak COVID medical staff worked in either HOT or COLD areas. Once the HOT ward reduced to a smaller area a defined junior was allocated to HOT patients. The consultant would mix but the ward round went from the COLD end and finished in the HOT end.
- Once the case mix started to change back to less COVID, the focus needed to change towards expanding our outpatient areas. A much smaller pool of consultants stayed in the 4 day in-patient model and more were then available for regular working hours to support the non patient facing staff.
- Junior doctors stayed on the 4 day model until the end of June.
- With an on-going small stream of COVID and increasing non COVID work, new rotas have been configured to encompass more support out of hours at both junior doctor level and consultant. We have maintained the same team approach for on-call with all levels in the team working on the same days Monday –Thursday and Friday – Sunday now we are running a 7 day consultant led service with daily ward rounds and rapid review post admission.

Key messages

- Rapid communication to maintain balance of work across inpatient areas
- Team 'bubble' approach to build morale and reduce cross staff sickness
- Continued change to the in-patient footprint to accommodate the differing case load and maintain in patient capacity.

Renal Outpatients

Authors: Helen Eddington

Summary of beneficial changes:

- *Off-site phlebotomy centres set up with specified 'shielding' times for immunosuppressed individuals.*
- *Phone or video clinics were held - face to face appointments offered if clinically indicated*
- *Video introduced for patient education and virtual home visits enabling us to continue to check homes are safe for home therapies*
- *Virtual clinics to be set up for non-patient contact review*
- *Face to face visits coordinated across all areas of renal medicine and surgery by a small multi-disciplinary team*
- *Renal administration staff allowed extended IT access to allow us to manage our own service more effectively*

Prior to Covid-19 pandemic:

- Our patients attended face to face appointments with a blood test performed during the attendance.
- If changes in renal function were noted this would need to be discussed with patient after clinic via telephone.
- The main reasons for this configuration was due to wide geographical spread of patients, difficulty in coordinating blood tests prior to clinic with no remote centres, and inability to see all of GP results within our catchment area.
- A large number of patients attended out-patients at any one time with pooled clinics which led to a significant foot-fall within the hospital. These were held over 5 different out-patient areas during the week.

In preparation for the Covid-19 pandemic:

- All records and results of patients due in clinic until July were reviewed by a consultant.
- Where appointments could be delayed due to either stability of function and low clinical risk this was arranged.
- All appointments changed to phone or video unless a face to face appointment was clinically necessary.

During Covid-19 pandemic

- Off site phlebotomy centres were set up in some areas and some GP practices were able to do blood tests.
- Phone or video clinics were held and only face to face appointments offered if clinically indicated. These were all covered by our shielding medical staff.

Post Covid-19 pandemic

Trust level changes

- The Trust implemented social distancing within all outpatient areas and restricted the number of patients that could be seen face to face within a 45 minute period.
- All staff and patients were required to wear masks; this was implemented prior to the government guidance.
- The trust increased the number of patients able to attend off-site phlebotomy to enable more activity. There was also an increased number of shielding spaces created for immunosuppressed individuals.
- The number of phlebotomy and observation rooms has increased within the main outpatient area to enable social distancing to be maintained though this led to reduced rooms for clinical activity.

Departmental changes

- As consultants were released from the emergency on-call rota the appointments that had been delayed were re-reviewed.
- The only area to open was the main out-patient area which left no space for a substantial proportion of our clinic activity. Therefore coordination of all renal medicine and surgery clinics was required to allow services to resume and to relieve any backlog. This over-arching coordination was performed by a small multi-disciplinary team which included lead consultants, managers and administration staff and ensured activity fell within the foot-fall restrictions and numbers of rooms available.
- Room and time allocation was split between key areas of transplant, CKD, a combined GN, vasculitis and lupus group and renal surgery. This allowed each group to book patients face to face within their allotted times. We started face to face activity slowly though this has continued to increase. Where areas did not require the face to face activity distributed this was then reallocated to other areas and continues to be reviewed.
- Where possible face to face visits were coordinated across all areas of renal medicine and surgery to limit visits to the hospital. For example pre-dialysis patients underwent Hep B vaccination and blood tests while attending vascular access appointments, or clinic appointments were performed while patients attended the infusion suite for immunosuppression. This requires ongoing input from the multi-disciplinary teams to ensure we limit our requests for patients to leave their home and relieve some pressure on off-site phlebotomy.

- There was a large clinic back-log however we were also aware we needed to ensure the workload was manageable by staff still recovering from managing the first Covid-19 peak. The post-covid consultant on-call rota differed to the pre-covid rota and junior staff were not released from in-patient activity for some time. This led to a reduction in the number of medical staff free to cover out-patient activity despite the need to cover all delayed appointments. Some consultants increased their contract activity to enable this to occur.
- Large numbers of administration changes were required for us to implement our 'new' service. There were initial difficulties determining which patients required phone/video or face to face appointments and also difficulties to ensure the face to face rules were not breached. To overcome this we set up new face to face clinic codes which were only for the set time spaces and limited to the maximum of each clinic. The phone clinics were limited depending on the number of medical staff available to ensure the workload was manageable. Any changes to the out-patient times, codes and numbers initially had to be implemented through the trust IT service. As all trust departments were asking for changes renal administration staff were allowed extended access to allow us to manage our own service more effectively.
- We are in the process of implementing a new service to perform a virtual review of stable patients who will undergo blood tests at remote phlebotomy centres. The results will be reviewed at an MDT with a consultant and specialist nurses and if all stable a letter will be sent out to inform the patient. If there are any concerns the consultant can phone the patient and plan further management. We envisage that these virtual appointments will be used across all aspects of our renal medicine service and will alternate with a patient contact appointment. As a safety net patients will also be provided with a phone number to contact us if they have developed a relevant new medical issue so we can convert all virtual appointments to phone or face to face as required. This service will free up clinic capacity and can also be run safely through any further Covid-19 peaks if necessary. In future we would like to utilise digital tools such as an electronic PROM to enable patients to report clinical change and submit data (such as home BP readings or community blood test results)
- Video has been used for patient education and 'virtual' home visits and enabled us to continue to check homes are safe for home therapies. There are advantages to all modes of consultation and we foresee that the future of our service will incorporate a mix of all modes in the long term.

Challenges and proposed solutions

- Patient feedback has been mixed in this time of uncertainty. The majority of patients prefer to have their results available to allow a more focussed consultation and find phone clinic much easier to handle with their work or home life. However there are other patients who really enjoy the face to face contact. The video consultations have had some technical issues so have been used less, though we expect these to become increasingly utilised in the future.
- To deliver phone or video clinics staff require a quiet space with no phone-calls or other people in the background. Some consultants are facilitating this by covering these from home or from an individual office space however the majority of consultants work in an

open plan office and require an out-patient room for this. When the junior medical team join clinic activity they will also require room space. The lack of areas has proved challenging and this will need to be considered in future planning if other out-patient areas do not open in the near future.

- Our service covers a large geographical area however the remote phlebotomy sites for the trust cover the closer secondary care catchment. Even within Birmingham, patients may require public transport to attend remote phlebotomy centres and those on transport also struggle to be accommodated.
- Some GPs have not been able to assist during the crisis and negotiations with GPs are ongoing to help provide services in the future. Some patients from the extended catchment area have blood tests done locally by their GP however they are not visible on our hospital system.
- We are considering a remote 'roving' phlebotomy service which may utilise dialysis units to help facilitate remote blood tests in the future.

Key messages

- Communication and coordination is central to success in implementation of changes in practice that affect all multidisciplinary team members. This worked because it was run by a small, tight and highly organised team
- Within the out-patient area very little has remained the same and therefore managing enforced change with a tired or stressed workforce has to be managed equitably, clearly and carefully.
- Be aware that many changes lead to increased pressure on administration staff and understanding the issues with booking systems and restraints are required to develop a new process.
- Listen to patient feedback. Not all change is bad and many of our new adjustments have led to an improvement in aspects of the service.

Peritoneal dialysis (PD)

Authors: Lavanya Kamesh, Clare Pattenden and Alison Moore

Summary of beneficial changes:

- *Video education to provide information on PD for pre-dialysis patients, or information on reducing risk of infections for patients established on PD*
- *1:1 training either in the PD unit or at home aided by the assisted APD team*
- *Use of Baxter sharesource (on line platform) to manage patients on automated peritoneal dialysis, allowing us to address problems and change dialysis prescriptions remotely.*
- *Sharesource coupled with video/telephone clinics helped us manage patients when they were self-caring in the community.*
- *In-house assisted APD (AAPD) team helped with training and managing peritonitis in the community. They have also been doing phlebotomy rounds to help monitor blood tests. We would like to augment the AAPD team to include the training component.*

Patient Education:

Pre-covid all patient education (information on PD for pre-dialysis patients, or on reducing risk of infections in patients established on PD) was offered in the unit as 1:1 or group education. During the covid crisis all routine education was stopped. In the recovery phase we are doing video consultations to provide information for pre-dialysis patients and send links to Baxter/Fresenius websites to watch information videos. We plan to re-start information days on reducing risk of infection via video.

Challenges

The video format is not suitable for everybody and the face to face contact is so important to reassure patients when they start on new treatment.

Future

Some parts of video education will be retained in selected group. We do want to re-start face to face education when the situation settles.

PD catheter insertion:

Pre-covid all PD catheter insertions were done at QE Hospital. We had access to regular lists and a dedicated surgeon who leads the lists. During the covid crisis our catheter insertions dropped from 6-8 per month to 2-5 per month (April and May). We were able to secure catheter insertion lists in a private hospital. In the recovery phase we are now re-building our capacity in QEH and the lists at private hospital will stop in July.

Challenges

We could not do some of the complex cases in the private setting. They had to be accommodated in the Emergency lists.

Future

We are relieved that we are getting our dedicated sessions back at QEH.

Training:

Pre-covid around two patients were trained together by one nurse in the PD unit and the training generally lasted for 3-5 days. Some patients were trained at home by assisted APD team or by Baxter nurse. During the covid crisis we commenced 1:1 training either in the PD unit or at home aided by the assisted APD team. During the recovery phase we are continuing in the same pattern as above. Baxter nurses have re-started helping out with training at home especially for patients who live far away from the hospital.

Challenges

We now have 8- 10 new starters this month. Training them safely and in time is a challenge as we are training the patients on a 1:1 basis.

Future

It is likely to continue in the same fashion. We will be relying heavily on the assisted APD team to provide training and this need to be considered in staffing numbers.

Follow up clinic appointments

Pre-covid there were five consultant led clinics every month working alongside trainees to review patients established on PD. In addition there were nurse led clinics that provided the support, reassurance and expertise for this group of patients managing self-care of dialysis. During the covid crisis all clinic appointments were switched to telephone clinics and lead by the nursing team. Only urgent cases were reviewed in the PD unit. In the recovery phase we have recovered some face to face clinic appointments, but these are severely restricted due to social distancing rules. We are using a mixture of telephone and face to face clinics to review patients.

Challenges

Some of the patients suffer from significant anxiety and want to avoid coming in to hospital. We are encouraging patients not to ignore their symptoms and to seek medical help. The telephone conversations help in easing anxiety.

Future

Telephone/ video clinics are here to stay and will be embedded in our pathways.

Special mention

Baxter Sharesource

In the last three years, the trust has been using Baxter sharesource (on line platform) to manage patients on automated peritoneal dialysis. This allowed us to address problems (eg fluid overload) and change dialysis prescriptions remotely without the patient needing to come to the PD unit. This coupled with video/telephone clinics certainly helped us to manage patients when they were self-caring in the community.

Assisted APD

We have our in house assisted APD service that provides care for 20-22 patients. During the pandemic, they have been crucial in patient management. In addition to taking on new patients, the team has helped with training and managing peritonitis in the community. They have also been doing “phlebotomy rounds” to help monitor blood tests.

Going forward, we would like to augment the AAPD team to include the training component.

Key messages

- Be open to transformation
- Work with industry partners to deliver patient care
- Embrace technology
- Build on the already successful areas of the service

Renal transplantation

Authors: Miriam Berry, Graham Lipkin, Adnan Sharif, Nick Inston and Steve Mellor

Summary of beneficial changes for recovery of transplant services:

- *Individual patient discussions to confirm consent to be re-activated*
- *Modified consent process to discuss COVID risk with or without renal transplantation*
- *Collaborative multi-disciplinary working to support decision making and optimise patient care*
- *Pathway for recipient assessment and rapid turnaround COVID-19 testing*

Summary of beneficial changes for transplant outpatient follow-up care:

- *Early implementation of modified immunosuppression protocol for renal transplant patients with suspected or confirmed COVID-19 infection*
- *Twice weekly joint surgical/medical outpatient clinic for essential visits, re-configured and reduced to ensure social distancing*
- *Individualised management plan for all transplant patients utilising off-site phlebotomy and telephone/video clinics to maintain safe follow up while reducing hospital visits*
- *Centralised management of patients under satellite clinics to share resources*
- *Pharmacy review to ensure judicious supply of immunosuppression*
- *Regular use of social media to disseminate updated guidance to transplant population*

Acute transplantation activity: suspension and recovery

University Hospitals Birmingham (UHB) provides renal transplantation services to a catchment area of approximately 5 million people across the Midlands, offering improved quantity and quality of life to patients with kidney disease. We perform more than 180 kidney transplants annually and have one of the longest waiting lists in the UK.

The West Midlands, and in particular UHB, experienced very high rates of COVID-19 related hospital admissions with significant impact on Intensive Care services. As a result our renal transplant programme was suspended in late March 2020 due to concerns about the safety of surgery and immunosuppression in an unfamiliar and rapidly evolving health crisis. However, our renal patients have been disproportionately affected by COVID-19 (in particular those patients receiving in-centre haemodialysis) emphasising the importance of timely and safe resumption of transplant activity.

Recovery of transplant activity

- Prioritised in-centre haemodialysis patients as those at highest risk of acquiring COVID-19 during a second wave of infection and having the most to gain from prompt transplantation
- MDT review, in conjunction with referring units, of all in-centre haemodialysis patients on the transplant waiting list to identify those at lowest anaesthetic, surgical and immunological risk to re-activate first
- Initially accepting DBD organ offers only to reduce risk of delayed graft function and prolonged hospital stay
- Individual patient discussions to confirm their consent to be re-activated at the current time
- Modified consent process to discuss COVID risk with or without renal transplantation
- Collaborative multi-disciplinary working to support decision making and optimise patient care
- Pathway for recipient assessment and rapid turnaround COVID-19 testing
- New “cold” multi-organ surgical ward to provide safe peri-operative care
- Reconfiguration of outpatient follow-up (see next section)
- Weekly review of organ offers and patients awaiting re-activation to expedite safe expansion of the programme

Outpatient follow-up care

Background

UHB (covering Queen Elizabeth and Heartlands sites) provides outpatient follow-up for approximately 1,500 renal transplant patients. Frequency of follow-up ranges from twice weekly immediately post-transplant to four monthly after several years. Until now patients have been cared for in a surgical clinic for the first six weeks post-transplant then moving to physician led care thereafter, with a schedule of follow-up appointments based on time since transplant and clinical need. We see approximately 250 transplant patients each week at the QE site, with regular transplant clinics also running at Heartlands Hospital, Solihull Hospital and Smethwick Kidney Treatment Centre.

Challenges

All non-essential outpatient activity at UHB was suspended in March 2020 to reduce hospital attendances and to facilitate the redeployment of staff to inpatient areas. Transplant recipients were advised to follow shielding advice as “extremely vulnerable” individuals and were, in many cases, understandably reluctant to leave home. However we needed to ensure regular monitoring of transplant function and drugs, a secure supply of immunosuppression medications and provide ongoing specialist medical care of patients with COVID-19 or unrelated illnesses.

Re-configuration of outpatient care

- Early implementation of modified immunosuppression protocol for renal transplant patients with suspected or confirmed COVID-19 infection
- Regular telephone contact with unwell transplant patients able to stay at home then dedicated “hot” COVID follow-up clinic when asymptomatic
- Register of all such patients to ensure appropriate immunosuppression monitoring and follow-up chest X-ray and tissue typing samples where necessary
- Twice weekly joint surgical/medical outpatient clinic for essential visits, re-configured and reduced to ensure social distancing
- Individualised management plan for all transplant patients utilising off-site phlebotomy and telephone/video clinics to maintain safe follow up while reducing hospital visits
- Centralised management of patients under satellite clinics to share resources
- Pharmacy review to ensure judicious supply of immunosuppression
- Regular use of social media to disseminate updated guidance to transplant population

Key points

- MDT collaboration is crucial, nephrologists, surgeons, specialist nurses and pharmacists all played an essential role
- An early plan to modify immunosuppression was vital
- Embrace technology to support clinical care
- Use social media as well as more traditional methods to communicate with patients