

# Environmental Control Services

Kathryn Thom, Occupational Therapist  
Suzanne Squire, Occupational Therapist

Specialist Equipment Service, Kent and Medway NHS  
and Social Care Partnership Trust

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# Environmental Control Services

- Provides specialist equipment that enables people with a severe disability to maintain independence, by giving them the means to operate devices in their home environment e.g. television, telephone, lamps and computer
- Specialist Equipment Service, Medway Maritime Hospital, Gillingham, Kent. Provides a service to three CCG / ICBs:
  - Kent and Medway, East Sussex and South East London (Bromley, Bexley, Greenwich, Lambeth, Southwark and Lewisham)
- Assistive Technology Service, St George's Hospital, London. Provides a service to:
  - Surrey, West Sussex and South-West London (Croydon, Kingston, Merton, Richmond, Sutton, Wandsworth)

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# Commissioning

- From April 2013 NHS England has commissioned EC services
- Revised EC specification published August 2018 :

NHS England (2018) 'Environmental Control Equipment for Patients with Complex Disability (All Ages)' Accessible at:

<https://www.england.nhs.uk/publication/environmental-control-equipment-for-patients-with-complex-disability-all-ages/>

- Sets out the requirements for what EC services should do, and standards they should meet.
- Main requirement is to carry out specialist assessments and provide environmental control equipment to those who need it

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# NHS England Specification

- ‘An individual requiring access to the EC service will have significant physical disability, predominately with upper limb impairments that result in them being unable to use standard controls, for example remote-control handsets or telephones or computer mice, keyboards or touch screens.’
- ‘The service is to be available to persons of all ages, diversities, medical conditions (acquired or congenital) and place of residence (independent living, with family, residential care, nursing home), who have a severe disability, which restricts their ability to independently operate standard means for control of the environment and access to computer technology.’
- A prioritisation system will be in place to ensure that individuals with a rapidly deteriorating condition are assessed and equipment provided (where appropriate) within a clinically appropriate time.

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# Links with AAC Services

- Augmentative and Alternative Communication (AAC) Services are commissioned by NHS England to provide high tech communication devices to clients who meet their criteria
- Some of the clients we see have a need for both EC and AAC equipment. We work in collaboration with the AAC teams in our areas for these clients (adults)
  - KMCAT (Kent)
  - GSST ACS (South East London)
  - CCAS (East and West Sussex, Surrey)
  - Compass AAC Service (South West London)
- Equipment can be integrated to meet both EC and AAC needs. Decisions on this are based on individual client need

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# Links with Suppliers

- The NHS has a supply contract with companies who want to provide EC equipment to the NHS. Suppliers can provide equipment only; or provision, installation and maintenance of equipment. We can only issue equipment that we can purchase via this contract
- Both services work with companies for their provision of EC equipment e.g.
  - Possum
  - PCbyVoice
  - Smartbox,
  - Tobii Dynavox,
  - DH2
  - Inclusive Technology

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# NHS England – What we do not provide:

- EC equipment affecting the fabric of the building and typically funded through application to other funding sources such as Disabled Facilities Grant (DFG) or minor adaptation, including:
  - door openers, window openers, curtain openers, replacement door locking mechanisms
  - building adaptations
  - electrical, joinery, carpentry or other minor adaptation
- Equipment for monitoring and health needs:
  - telecare equipment, tele-health equipment and tele-rehab equipment
- Non-specialist commercially available home control products e.g. Alexa

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# NHS England - Referral Criteria

- ‘Profound and potentially complex physical disability, such that they are unable to operate standard controls for functioning independently in the home.’
  - Long term permanent disability
  - Impairment of function in both upper limbs
  - Unable to use standard controls for TV etc
- Cognitively and physically able to operate EC equipment consistently.
- Able to demonstrate sustained motivation to use the EC equipment.
- Support available from care-givers

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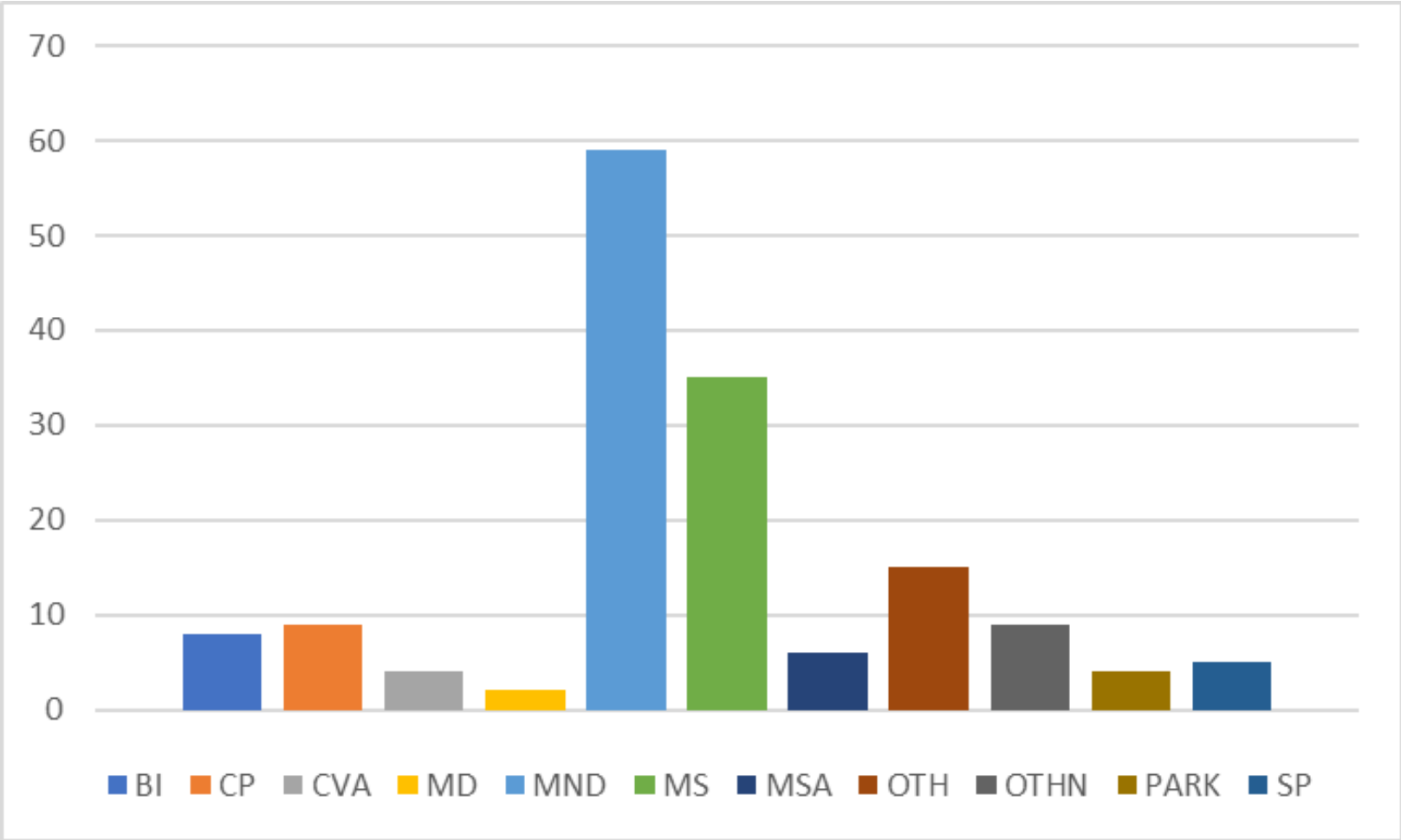
# Process - Referrals

- Referrals
  - On the service referral form – see website
  - As much relevant information as possible
  - Can be made by any professional involved with the client
- Acknowledged by service to client and referrer within 10 days of receipt
- Triaged by service – further information may be requested
- Prioritisation if appropriate

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# Referrals 2021 – 22 by Diagnosis (156)



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# Assessment

- Completed by Occupational Therapist
- Usually within 8 weeks of receipt of referral
- Can be a joint visit if this is requested on referral form
- Need to consider:
  - Impact that provision of ECS may have – considering control unit and control method
  - Compromises involved
  - Impact on others in environment

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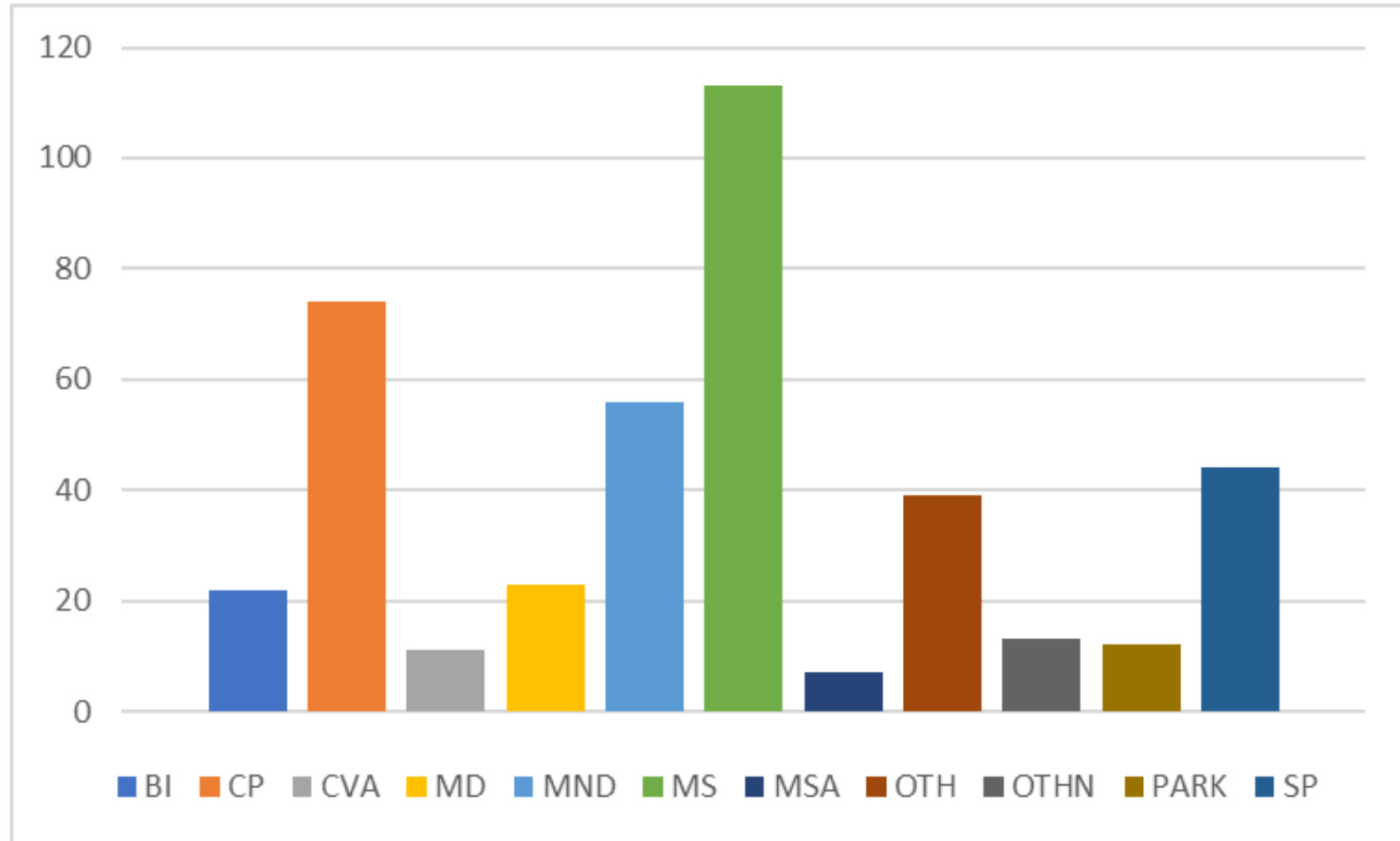
# Provision of Equipment

- Assessment does not always lead to ECS provision, could suggest other intervention
- Could involve a trial of equipment / switches
- Provision of ECS
- Training
- On-going support
- Review and changes made as required to ensure successful use of the equipment
- Equipment serviced annually

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# Service Users – Diagnosis (414)



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# Example of EC Equipment 1

- Possum Freeway - stand-alone EC device. We use this for clients who do not want too many functions, maybe who require a fairly simple set up. We can then add to the complexity as needed.
- Requires minimal support from carers
- Easy to use



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# Case Study

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# Referral

- Referred July 2022 by Housing Occupational therapist
- Age 68
- Diagnosis: Multiple Sclerosis, Oesteoarthritis, Diabetes type 2
- Sensory: Cataracts bilateral reduced vision
- Mobility: Powered wheelchair user, accessed with a joystick
- Upper limb- bilateral tremor, reduced fine motor.
- Cognition age appropriate
- Lives in a 2 bed housing association property. Access only downstairs now has profile bed in dining room. Washes at the kitchen sink. Commode insitu.
- Carers QDS

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# Referral

- Previously seen by the sensory team who gave her a large button phone. Phone is very important to her.
- Uses a laptop and the mouse pad to access computer. Was using a mouse but this is difficult for her and struggling with computer access.
- Reduced grip affecting holding telephone handset, mouse, remote control. Using both hands to steady and hold objects but often drops them.

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# Assessment

- Seen at home.
- Marion was seen sat in her wheelchair, postural review, upper limb observations, sensory (vision).
- Consideration of daily routine.
- Observations using keyboard, mouse, remote control and telephone.
- Carers left a list of what they felt needed to be looked at which consisted of TV, computer and telephone.

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## Marion's goals / aims

- Making access to a phone easier.
- Making access to her computer easier
- Control of her lighting.
- Finding a way to use the remote control and not drop it, or accessing another way.

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# Options for equipment provision

- Freeway and freedom for telephone access.
- Floor stand
- Frab jelly button, tremor function.
- Two sockets for lamps
- Key board with keyguard and lights



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# Follow-up actions

- Installation by engineer, joint visit with OT
- Additional visits by engineer to make changes to programming, alter answer phone
- Still considering possible freedom to be put on back of the wheelchair with a button for answering calls.
- Joint visit with rehab engineer for computer access ongoing.
- We will continue to review annually via annual service visits or as requested by client / other professionals

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## Example of EC Equipment 2

- Possum Qwayo
- More complex device which can control many more functions
- Android Tablet - in addition to TV, lamp etc, this can be used to access on-line functions and Apps such as Kindle, WhatsApp, YouTube etc
- Integral mobile phone
- More complex device requires more support from carers



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# Example of EC Equipment 3

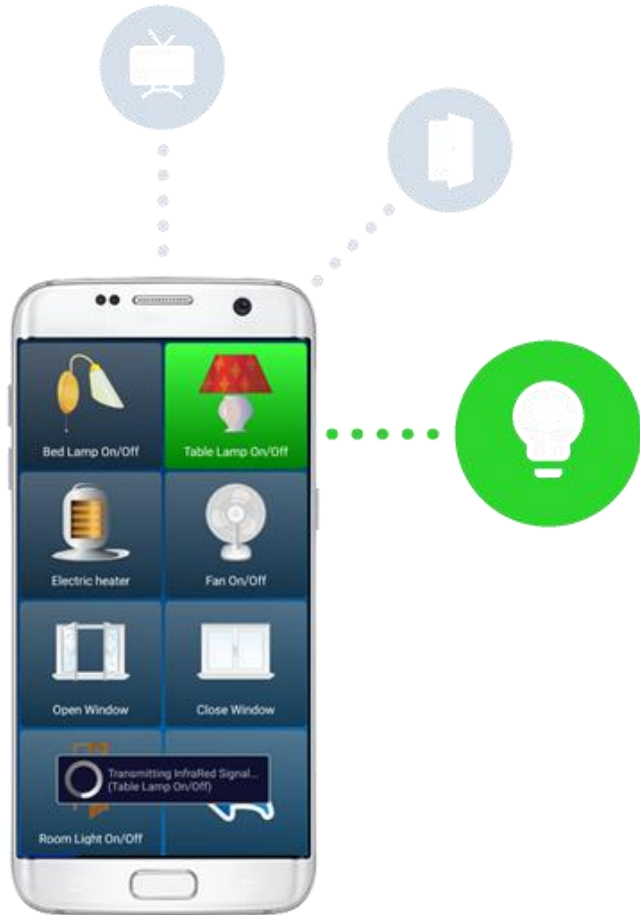
- Housemate - Uses client's own Tablet or phone as an EC device
- We provide hardware (Housemate Hub) to enable this. Client then downloads the relevant App onto their device (Android or iOS)
- Own device can then be used much like the Qwayo
- Can access with the screen, voice or switch
- Be aware of compromises in using own device



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# Housemate



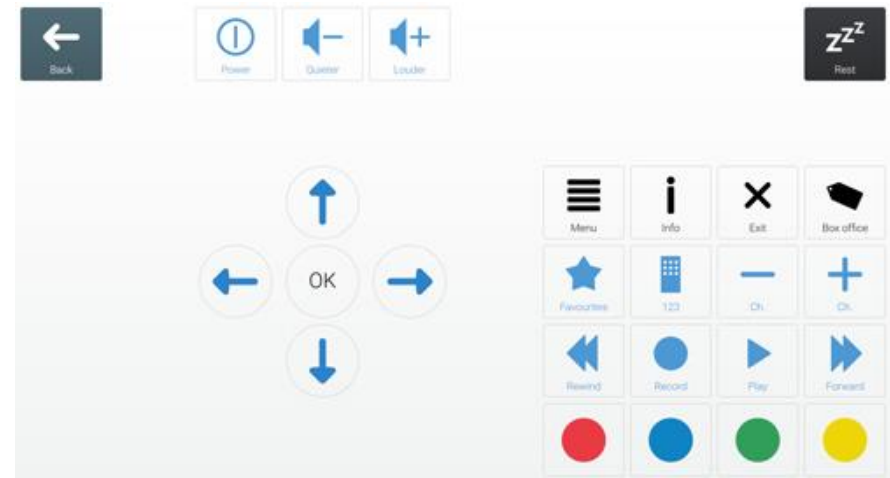
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# Example of EC Equipment 4

- Grid Pad - Integrated device for communication, computer access and EC, can be accessed via eye-gaze or head mouse as well as a switch. Need to consider additional complexities involved.



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# Examples of EC Equipment 5

- Simpler solutions
- Can be used alongside other EC equipment
- Can be used as a first stage of provision for people with a deteriorating condition



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# Attention Calling

- We provide equipment that can enable people to let someone know they need support. Can be using a pager, telephone or interface with a call system if appropriate
- For all requests a risk assessment is completed, looking at the possible reasons for calling, who will respond to the call, how the person will make the call and what the risks may be
- Our equipment should not be used for any life threatening reasons for call. There are situations where the equipment may not work as planned. If there is a failure in the equipment the client may wait 48 hours for this to be resolved, so there must always be other plans in place for if this occurs

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# Phone and Computer access

- Includes Windows, Apple and Mobile devices
- Can make many adjustments within existing software
- Access – mainstream and more specialist

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# Clients access to phone/tablet.

- Is it part of your assessment considerations?
- Is it an activity of daily living?
- Is there something you can do to make an immediate effect to help them access their device?

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# Phone access



- Place your phone in your lap
- Using only 1 hand.
- Attempt unlocking your phone with your knuckle.
- Attempt unlocking with your non dominant hand.
- If you have face id set up attempt opening it whilst it is on the table/desk flat not using your hands to hold it.

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# Barriers



Limited skills

Anxiety about technology

A lack of knowledge

Cowan & Khan 2005; Jans and Scherer 2006

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# Accessing mobiles/tablets

## Clients issues;

- Holding the phone, dropping the phone.
- Only using one hand, reduced dexterity and coordination.
- Seeing the phone/ positioning.
- Making/ Answering /ending phone call
- Sending messages
- Accessing apps

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# Voice Control

- “Hey Siri” on iPad / iPhones lets you control all inbuilt apps and settings. Show numbers
- “OK google” (Google assistant) on Android phones / tablets and “
- “Hey Cortana” on Windows tablets and Windows 10

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# Phone: Settings ≥ Accessibility

- Physical & Motor

Touch

Reachability

Call audio/ auto-answer

Face id/ auto unlock

Switch control

Voice control/ numbers overlay

Using iPods/ watch

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- Vision

Spoken text

Size / font

Voice over

Motion

Contrast

- Hearing

Hearing devices

Led flash alert

Background noise reduced

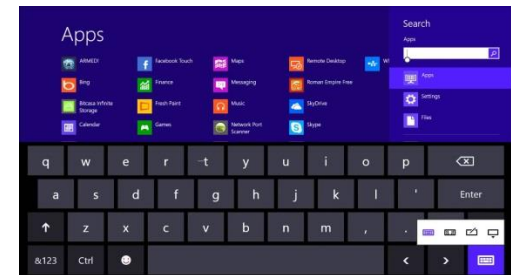
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# Alternative Keyboards

- Mini Keyboards
- Expanded Keyboards
- Onscreen Keyboards Windows
- Key guards
- Touch screen keyboards



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# Mouse Alternatives

- Trackball
- Joysticks
- Touch Pad
- Head control mice
- Eyegaze



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# Any questions?

See websites for all contact details, referral forms etc:

<https://www.kmpt.nhs.uk/our-services/environmental-control-service/>

<https://www.stgeorges.nhs.uk/service/community-services/assistive-technology-service/>

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