

**Sustainable Mental Healthcare: A Service Review Framework**

This framework has been developed as a practical tool for service development or commissioning of sustainable mental health services. It comprises four sections, each of which tackles one of the four principles of sustainable mental healthcare:

1. [Prioritising prevention p3](#_Section_1:_Prioritising_1)
2. [Empowerment of individuals and communities p6](#_Section_2:_Empowerment)
3. [Improving value p9](#_Section_3:_Improving)
4. [Considering carbon p13](#_Section_4:_Considering)

The intention is that one or more members of a commissioning or service review team could be tasked with completing the template for their service (to whatever level of detail their time allows), which will lead them to systematically consider current strengths and opportunities for improvement in each area. Findings can then be considered by the wider team for further investigation or implementation.

The framework has been produced in support of the *Guidance for Commissioners of Financially, Environmentally and Socially Sustainable Mental Health Services* (Joint Commissioning Panel for Mental Health & Centre for Sustainable Healthcare, 2015), which provides more detailed explanation, guidance and case studies.

**Michael Pearce1, Oliver Bashford1, Arif Ahmed1, Suhana Ahmed1,   
Daniel Maughan2, Frances Mortimer3**

**August 2016 (revised February 2017)**

*1. Royal College of Psychiatrists Sustainability Scholar 2015-16, Centre for Sustainable Healthcare. 2. Associate Registrar for Sustainability, Royal College of Psychiatrists. 3. Medical Director, Centre for Sustainable Healthcare*

# Overview

## About your service:

|  |  |
| --- | --- |
| Service name: |  |
| Population area served: |  |
| Commissioning organisation(s): |  |
| Provider organisation(s): |  |
| Mental health needs served: |  |

## This review:

|  |  |
| --- | --- |
| Purpose of review: |  |
| Requested by: |  |
| Undertaken by: |  |
| Last updated: |  |

# Section 1: Prioritising prevention

Preventing poor mental health can reduce mental health need and therefore burden on services, important for a sustainable healthcare system. Prevention involves tackling the social, psychological and biological determinants of ill health. This section will to help you identify opportunities across your service to enhance prevention.

1: What is the local need?*Based on local needs assessment or census data. For example: look up the local Joint Strategic Needs Assessments (JSNA) and* [*PH England Fingertips*](https://fingertips.phe.org.uk/) *which are both freely available online. Where local data is not available, national data can sometimes be used, adjusted for local populations.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Prevalence of different mental illnesses* | *Identify risk factors (bio/ psycho/ social/ environmental) (see step 3)* | *Identify protective factors for mental health resilience* | *Numbers at high risk (enables targeting of prevention strategies)* | *Levels of unmet need* |
|  |  |  |  |  |

Once the scale and level of need in the local area has been identified, an assessment should take place of the assets and opportunities that are available to meet this need, or to increase resilience:

2: Assess local assets/resources *(quality, quantity and accessibility):*

|  |  |  |  |
| --- | --- | --- | --- |
| *Statutory services (Primary/secondary care)* | *Other public services (social care, schools, police, employment and housing services.)* | *Services provided by charitable/third sector organisations.* | *Natural spaces, ecotherapy, social prescribing.* |
|  |  |  |  |

Next, consider the risk factors for mental illness in the target patient group (for a useful start see: [WHO: Risks to Mental Health](http://www.who.int/mental_health/mhgap/risks_to_mental_health_EN_27_08_12.pdf), or relevant NICE guidance). Evidence-based prevention strategies exist that can address these risks (consider using the [*Guidance for commissioning public health mental health services*](http://www.jcpmh.info/resource/guidance-for-commissioning-public-mental-health-services/) (JCP-MH, 2015) to identify these).

Finally, the assets identified above can be prioritised, and consideration made of whether new assets are required to improve prevention:

3: What are the possible prevention strategies and how could the available assets be used to deliver these?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Risk factor* | *Prevention strategies* | *Asset mapping* | | |
| *Asset* | *Capacity/coverage* | *Unmet need* |
| ***Social:***  *Social isolation, Poverty etc.*  ***Biological:***  *Physical illness, obesity, Alcohol use, comorbid mental illness etc.*  ***Psychological:***  *Poor coping strategies, bereavements etc.* |  |  |  |  |

### 4: Could there be more pathways into services and are they accessible?

|  |  |  |
| --- | --- | --- |
| *Pathways into services* | *Groups excluded/ presenting late* | *Options to improve accessibility* |
|  |  |  |

5: How well are physical health problems prevented and treated in this group?

|  |  |  |
| --- | --- | --- |
| *Physical health problems* | *Early identification/ intervention strategies* | *Prevention strategies* |
|  |  |  |

Education and awareness help to ensure people are identified early and access services in a timely way, essential for prevention:

6: How could awareness about prevention of mental ill-health be improved?

|  |  |  |
| --- | --- | --- |
| *Target group* | *Awareness / education programme* | *Where this could be delivered* |
| *Community*  *Commissioners*  *Acute care staff*  *Primary care staff*  *Social care staff* | *Eg. 5 ways to wellbeing, Reducing stigma campaigns etc.* |  |

7: Could staff capacity, coordination and capability be increased?

|  |  |  |
| --- | --- | --- |
| *Capacity* | *Coordination* | *Capability* |
| *Eg. Allocate clinician time to prevention/public health* | *Eg. Appoint a ’prevention champion’* | *Eg. Implement a* **‘**[make every contact count](http://www.makingeverycontactcount.co.uk/)**’ programme** |

8: How is the mental wellbeing of staff being supported? *Consider physical, environmental and psychosocial factors such as; workload, job control, role clarity and bullying.*

|  |  |  |
| --- | --- | --- |
| *Staff group* | *How is wellbeing monitored in this group?* | *Wellbeing interventions* |
| *Eg. Administrators, clinicians etc.* | *Eg. surveys* | *Eg. Adopt the PHE Healthy Workplace Charter. Also see: Better Mental Health For All: A public health approach to mental health improvement (Faculty of Public Health & Mental Health Foundation, 2016)* |

9: How could/is prevention be/ing incentivised through commissioning?

|  |  |  |
| --- | --- | --- |
| *What outcomes are being measured in this group?* | *Possible CQUINS or other incentives for early identification/intervention* | *Relevant public health outcomes* |
|  |  | *see the NHS, Public Health, and Social Care Outcomes Frameworks* |

Key references:

[Guidance for commissioning public health mental health services](http://www.jcpmh.info/resource/guidance-for-commissioning-public-mental-health-services/) (JCP-MH, 2015)  
[Guidance for commissioners of financially, environmentally, and socially sustainable mental health services](http://www.jcpmh.info/good-services/sustainable-services/) (JCP-MH, 2015)

# Section 2: Empowerment of individuals and communities

A central principle of sustainable services is the empowerment of service users and communities to manage their own health independently as much as possible. Providing a framework for information provision and a catalogue of health resources is critical to success. It requires a shift towards greater patient choice, self-care, knowledge and involvement, and the bringing together of community assets to improve mental health in the community.

Completing this section for your service will help to identify its current strengths, as well as actions and outcome measures that could be used to measure and drive improvements. The majority of the domains listed are based upon NICE guidelines and quality standards.

**1. Do all service users have opportunities to discuss health beliefs, concerns and preferences?**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  |  | *See* [*NICE QS15*](https://www.nice.org.uk/guidance/qs15) *– Quality Statement 4* |

**2. Supporting patient choice**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  |  | *See* [*NICE QS15*](https://www.nice.org.uk/guidance/qs15) *– Quality Statement 7* |

**3. Providing information**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  | *e.g. introducing NHS Expert Patient Programme or equivalent; pharmacist medication reviews.* See [*NICE CG136*](https://www.nice.org.uk/guidance/cg136/chapter/1-Guidance)*.* |  |

**4. Shared decision making**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  |  | *See* [*NICE QS14*](https://www.nice.org.uk/guidance/qs14) *– Quality Statements 3 and 11* |

**5. Health technology –** Can service-users access any or all of their medical records?Are there any self-monitoring systems in use?Are remote support services / psychoeducation resources available?

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  |  |  |

**6. Peer support**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  | See *Implementing Recovery through Organisational Change [ImROC] –* [*Peer Support Workers – a practical guide to implementation*](http://www.imroc.org/wp-content/uploads/7-Peer-Support-Workers-a-practical-guide-to-implementation.pdf) |  |

**7. Health coaching –** Is health coaching available? *(*[*NICE CG 138*](https://www.nice.org.uk/guidance/cg138/chapter/1-Guidance)*;* [*Nesta*](http://www.nesta.org.uk/publications/heart-health-realising-value-people-and-communities)*)*Is training available for staff in coaching or motivational interviewing techniques?

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  | *e.g. introducing the NHS Tailored Health Coaching service; training for staff* |  |

**8. Group activities –** Is there a range of activity groups accessible to service users? What are the gaps?Is transport available for less mobile service users? Are online groups available?

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  | *e.g. provide an up-to-date online web resource listing local groups; introduce a social prescribing programme* | *e.g. Patient awareness and uptake of group activities* |

**9. Supported employment programmes**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  |  | *See* [*NICE QS80*](https://www.nice.org.uk/guidance/qs80) *– Quality Statement 5* |

**10. Recruitment of service users –** Does the organisation actively recruit service users into voluntary/ paid employment?Does the organisationgive contracts to ancillary service providers that actively recruit service users?

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  |  |  |

**11. Are service user views used to monitor and improve the performance of the service?**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  |  | *See* [*NICE QS14*](https://www.nice.org.uk/guidance/qs14) *– Quality Statement 5* |

**12. Service user engagement with management and leadership**

|  |  |  |
| --- | --- | --- |
| *How does your service do this?* | *How could it be improved?* | *Relevant quality measures* |
|  | *e.g. Introduce experience based co-design (EBCD) (see* [*King’s fund report*](http://www.kingsfund.org.uk/projects/ebcd) *2013)* | *e.g. annual reporting of service user involvement in governance committees etc.* |

Key reference:

[At the heart of health. Realising the value of people and communities](http://www.nesta.org.uk/publications/heart-health-realising-value-people-and-communities) (Nesta, March 2016).

# Section 3: Improving value

A high value service will deliver the best outcomes for patients and populations for the minimum economic, environmental, and social resources. Improving the quality of care is necessary but not sufficient to improve value: a high quality service will not be of high value if the resources could have produced greater benefits elsewhere.

Completing this section will lead you to consider how the *allocative*, *technical* and *personalised* value of your service could be optimised, so that the right care is provided to the right patients at the right time – with minimum waste.

**1. Are resources allocated for greatest benefit?**

How does your service ensure that the patients accessing/referred into the service are those who will benefit most? *(e.g. quality and accessibility of referral guidelines; access to specialist advice)*

|  |
| --- |
|  |

How are GPs supported to provide optimum care for patients remaining in primary care?

|  |
| --- |
|  |

Is there the right level of investment across services?

|  |  |  |
| --- | --- | --- |
|  | *Proportion of spend (for your service, if information available; otherwise for mental health services collectively)* | *Comments – for discussion with your team* |
| *Prevention* |  |  |
| *Primary care* |  |  |
| *Secondary care* |  |  |
| *Community services* |  |  |
| *Carer support* |  |  |
| *Total:* |  |  |

**2. Are patients receiving evidence-based care?**

Can your service demonstrate that it is meeting evidence-based quality standards?

|  |  |  |  |
| --- | --- | --- | --- |
| *Condition / treatment* | *Relevant clinical guidelines* | *Quality standards* | *Current performance* |
| *e.g. dementia* | *E.g.* [*NICE guideline CG42*](https://www.nice.org.uk/guidance/cg42) | [*NICE QS1*](https://www.nice.org.uk/guidance/qs1) |  |
| *e.g. Anxiety* | [*NICE guideline CG113*](https://www.nice.org.uk/guidance/cg113) | [*NICE QS53*](https://www.nice.org.uk/guidance/qs53) |  |
| *e.g. psychological therapy* | [*NICE depression guideline CG90*](https://www.nice.org.uk/guidance/cg90) | [*IAPT waiting standard*](https://www.england.nhs.uk/wp-content/uploads/2015/02/mh-access-wait-time-guid.pdf) |  |
|  |  |  |  |
|  |  |  |  |

*Further standards relevant to your service can be found at:*

[*https://www.nice.org.uk/standards-and-indicators*](https://www.nice.org.uk/standards-and-indicators)

[*http://www.cqc.org.uk/content/regulations-service-providers-and-managers*](http://www.cqc.org.uk/content/regulations-service-providers-and-managers)

[*https://www.england.nhs.uk/wp-content/uploads/2015/02/mh-access-wait-time-guid.pdf*](https://www.england.nhs.uk/wp-content/uploads/2015/02/mh-access-wait-time-guid.pdf)

[*https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf*](https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf) *(page 70)*

**3. Are patients receiving personalised care?**

*(see also Section 2 of this Framework: Empowerment of Individuals and Communities)*

Different patients will hold different personal values, for example in relation to the benefits and harms of options available to them. A high value service will ensure that care is tailored to the individual (their circumstances, clinical condition, comorbidities and genetic or other factors) and that each patient’s values are taken into account with regard to the outcomes that are pursued.

Does the service use patient-identified goals as outcome measures?

|  |
| --- |
|  |

*Guidance at* [*http://www.rcpsych.ac.uk/files/pdfversion/OP78x.pdf*](http://www.rcpsych.ac.uk/files/pdfversion/OP78x.pdf) *or* [*http://mentalhealthpartnerships.com/resource/outcome-measures/*](http://mentalhealthpartnerships.com/resource/outcome-measures/)

4. Is there any unexplained/unwarranted variation in the outcomes for your service?

In relation to other places: for regional differences see [The CentreForum Atlas of Variation. Identifying unwarranted variation across mental health and wellbeing indicators in England](http://www.centreforum.org/assets/pubs/atlas-of-variation.pdf) (CentreForum, 2014)

|  |  |  |  |
| --- | --- | --- | --- |
| *Mental health indicator* | *Value for your population (deviation from average)* | *Warranted/*  *unwarranted?* | *Options for action* |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Within your service: are there groups (e.g. defined by geography, age, ethnicity, medical condition or other) whose needs are not currently well served?

|  |  |  |  |
| --- | --- | --- | --- |
| *Indicator/outcome* | *Values for defined patient groups  (deviation from average)* | *Warranted/ unwarranted?* | *Options for action* |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

NB: Are the most appropriate outcomes measured? *Guidance at:* [*http://www.rcpsych.ac.uk/files/pdfversion/OP78x.pdf*](http://www.rcpsych.ac.uk/files/pdfversion/OP78x.pdf) *and* [*http://mentalhealthpartnerships.com/resource/outcome-measures/*](http://mentalhealthpartnerships.com/resource/outcome-measures/)

**5. Scanning your system for waste from start to finish**

Before beginning this section, consider mapping out the patient pathway(s) for your service, from referral into the service, to discharge out.

Review potential waste in the use of clinical resources:

|  |  |  |
| --- | --- | --- |
| *Resource* | *Potential source of waste in your service* | *Options for action* |
| Medications |  |  |
| Blood tests |  |  |
| Imaging tests |  |  |
| Medical equipment |  |  |
| Inpatient beds |  |  |
| Operating theatres |  |  |
| Staff time |  |  |
| Staff travel |  |  |
| Patient & carer time |  |  |
| Patient and carer travel |  |  |

Consider potential waste in clinical processes:

|  |  |  |
| --- | --- | --- |
| *Clinical process waste* | *Potential relevance to your service* | *Options for action* |
| *Patient record not available /consulted, leading to duplications/omissions* |  |  |
| *Insufficient time invested to enable patients to participate effectively in decisions about their care* |  |  |
| *Clinical tasks not designed around patient need* |  |  |
| *Inefficient use of staff time* |  |  |
| *Inefficient use of patient/carer time* |  |  |
| *Information not available for decision-making* |  |  |
| *Unnecessary delays to referral* |  |  |
| *Unnecessary delays to treatment* |  |  |
| *Unnecessary delays to discharge* |  |  |
| *Excessive waiting (staff or patients) at any point* |  |  |
| *Patient and carer travel* |  |  |
| *Duplications in information or tests* |  |  |

*See:* [*“Promoting Value, Protecting Resources: a doctor’s guide to cutting waste in clinical care” (AOMRC, 2014)*](http://www.aomrc.org.uk/dmdocuments/Promoting%20value%20FINAL.pdf)

Look out, also, for the five activities identified by the Royal College of Psychiatrists’ “[Choosing Wisely](http://www.rcpsych.ac.uk/healthadvice/choosingwisely.aspx)” initiative as unnecessary or potentially harmful to patients. [Add table when published]

**6. What systems are in place to ensure that the improvement in value of the service is a continuous ongoing process?**

Are there designated individuals or teams in the service with the responsibility of reviewing this process?

|  |
| --- |
|  |

Are there regular fora for service users and carers to be actively involved in service improvement?

|  |
| --- |
|  |

*Have you considered using the methodology of ‘*[*Experience-based co-design’*](http://www.kingsfund.org.uk/projects/ebcd)*, where teams and patients are directly involved in developing services?*

Key references:

Gray, M., Jani, A. Promoting Triple Value Healthcare in Countries with Universal Healthcare. *Healthc Pap. 2016*;15(3):42-8.

Promoting Value, Protecting Resources: a doctor’s guide to cutting waste in clinical care. Academy of Medical Royal Colleges (2014).

# Section 4: Considering carbon

Calculating the carbon footprint per appointment or inpatient bed day for your service will give you an understanding of the relative contributions from different factors, and a baseline for measuring carbon reduction over time.

Parts A & B of this section provide a step-by-step process for estimating the average carbon footprint for an appointment and bed day in your service. You can then use these figures to understand where the carbon hotspots are in your service. You can also estimate the carbon footprint of different services by establishing the number of appointments and/or bed days the service uses. Part C highlights factors that are known to be important components of the carbon footprint of mental health services in England, together with suggested approaches to reducing them.

**Part A: Carbon Footprint Calculator Step by Step (outpatient appointments)**

Complete the tables below using data from your service.

**Step 1: Travel (outpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Mode of transport*** | ***Average travel per appointment*** *– by staff and patients (km)* | ***Emissions factor*** *(CO2e/km)* | ***Annual OP emissions (travel)*** *(CO2e)*  *= Average travel x Emissions factor* |
| Bus |  | 0.10172 |  |
| Car |  | 0.18909 |  |
| Train |  | 0.04885 |  |
|  |  | ***Total: (= Step 1 result)*** |  |

**Step 2: Medication (outpatient)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Medication*** *name/ class* | ***Average quantity prescribed per appointment*** | ***Minimum cost of medication in BNF*** *(£)* | ***Emissions factor*** *(CO2e/£)* | ***Annual OP emissions (med)*** *(CO2e)*  *= Quantity x cost x Emissions factor* |
|  |  |  | 0.43 |  |
|  |  |  | 0.43 |  |
|  |  |  | 0.43 |  |
|  |  |  | 0.43 |  |
|  |  |  | ***Total:***  ***(= Step 2 result)*** |  |

**Step 3: Energy use (outpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Annual spend (energy)***  *Annual organisational spend for energy - from accounts (£)* | ***OP Proportion***  *Of total spend on inpatient and outpatient care, proportion spent on outpatient* | ***Emissions factor***  *(CO2e/£)* | ***Annual OP emissions (energy)*** *(CO2e)*  *= Annual spend (energy) x OP proportion  x Emissions factor* |
|  |  | 0.212 |  |

|  |  |  |
| --- | --- | --- |
| ***Annual OP emissions (energy)***  *(from table above)* | ***Appointments*** *Number of appointments per year* | ***Average emissions (energy) per appointment*** *(CO2e)* ***(=Step 3 result)*** *= Annual OP emissions (energy) ÷ Appointments* |
|  |  |  |

**Step 4: Non-medical procurement (outpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Annual spend (non-med-proc)*** *Annual organisational spend for non-medical procurement - from accounts (£)* | ***OP Proportion***  *Of total spend on inpatient and outpatient care, proportion spent on outpatient* | ***Emissions factor***  *(CO2e/£)* | ***Annual OP emissions (non-med-proc)*** *(CO2e)*  *= Annual spend  x OP proportion  x Emissions factor* |
|  |  | 0.34 |  |

|  |  |  |
| --- | --- | --- |
| ***Annual OP emissions (non-med-proc)***  *(from table above)* | ***Appointments*** *Number of appointments per year* | ***Average emissions (non-med-proc) per appointment*** *(CO2e)* ***(= Step 4 result)*** *= Annual OP emissions (non-med-proc) ÷ Appointments* |
|  |  |  |

**Step 5: Medical equipment (outpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Annual spend (med-equip)***  *Annual organisational spend on medical equipment - from accounts (£)* | ***OP Proportion***  *Of total spend on inpatient and outpatient care, proportion spent on outpatient* | ***Emissions factor***  *(CO2e/£)* | ***Annual OP emissions (med-equip)*** *(CO2e)*  *= Annual spend  x OP proportion  x Emissions factor* |
|  |  | 0.30 |  |

|  |  |  |
| --- | --- | --- |
| ***Annual OP emissions***  ***(med-equip)***  *(from table above)* | ***Appointments*** *Number of appointments per year* | ***Average emissions (med-equip) per appointment*** *(CO2e)* ***(=Step 5 result)*** *= Annual OP emissions (med-equip) ÷ Appointments* |
|  |  |  |

**Step 6: Carbon footprint per outpatient appointment**

|  |  |  |
| --- | --- | --- |
| ***Contributing factor*** | ***Carbon contribution*** *(fill in the results from Steps 1-5)* | ***Percentage contributions*** |
| *Step 1 - Medication* |  |  |
| *Step 2 - Travel* |  |  |
| *Step 3 - Energy use* |  |  |
| *Step 4 - Non-medical procurement* |  |  |
| *Step 5 - Medical Equipment* |  |  |
| ***Total:*** |  |  |

*= average carbon footprint per appointment in your service (kg CO2e)*

**Part B: Carbon Footprint Calculator Step by Step (inpatient bed-days)**

Complete the tables below using data from your service.

**Step 1: Travel (inpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Mode of transport*** | ***Average travel per bed day*** *– by staff, patients and visitors (km)* | ***Emissions factor***  *(CO2e/km)* | ***Annual IP emissions (travel)*** *(CO2e)*  *= Average travel x Emissions factor* |
| Bus |  | 0.10172 |  |
| Car |  | 0.18909 |  |
| Train |  | 0.04885 |  |
|  |  | ***Total: (= Step 1 result)*** |  |

**Step 2: Medication (inpatient)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Medication*** *name/ class* | ***Average quantity prescribed per bed-day*** | ***Minimum cost of medication in BNF*** *(£)* | ***Emissions factor*** *(CO2e/£)* | ***Annual IP emissions (med)*** *(CO2e)*  *= Quantity x cost x Emissions factor* |
|  |  |  | 0.43 |  |
|  |  |  | 0.43 |  |
|  |  |  | 0.43 |  |
|  |  |  | 0.43 |  |
|  |  |  | 0.43 |  |
|  |  |  | ***Total:***  ***(= Step 2 result)*** |  |

**Step 3: Energy use (inpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Annual spend (energy)***  *Annual organisational spend for energy - from accounts (£)* | ***IP Proportion***  *Of total spend on inpatient and outpatient care, proportion spent on inpatient* | ***Emissions factor***  *(CO2e/£)* | ***Annual IP emissions (energy)*** *(CO2e)*  *= Annual spend (energy) x IP proportion  x Emissions factor* |
|  |  | 0.212 |  |

|  |  |  |
| --- | --- | --- |
| ***Annual IP emissions (energy)***  *(from table above)* | ***Bed days*** *Number of bed-days per year* | ***Average emissions (energy) per bed day*** *(CO2e)* ***(=Step 3 result)*** *= Annual IP emissions (energy) ÷ Bed days* |
|  |  |  |

**Step 4: Non-medical procurement (inpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Annual spend (non-med-proc)*** *Annual organisational spend for non-medical procurement - from accounts (£)* | ***IP Proportion***  *Of total spend on inpatient and outpatient care, proportion spent on inpatient* | ***Emissions factor***  *(CO2e/£)* | ***Annual IP emissions (non-med-proc)*** *(CO2e) = Annual spend (non-med-proc)  x IP proportion  x Emissions factor* |
|  |  | 0.34 |  |

|  |  |  |
| --- | --- | --- |
| ***Annual IP emissions (non-med-proc)*** *(CO2e)  (from table above)* | ***Bed days*** *Number of bed-days per year* | ***Average emissions (non-med-proc) per bed day*** *(CO2e)* ***(=Step 4 result)*** *= Annual IP emissions (energy) ÷ Bed days* |
|  |  |  |

**Step 5: Medical equipment (inpatient)**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Annual spend (med-equip)*** *Annual organisational spend on medical equipment - from accounts (£)* | ***IP Proportion***  *Of total spend on inpatient and outpatient care, proportion spent on inpatient* | *Emissions factor (CO2e/£)* | ***Annual IP emissions (med-equip)*** *(CO2e)*  *= Annual spend (med-equip) x IP proportion  x Emissions factor* |
|  |  | 0.30 |  |

|  |  |  |
| --- | --- | --- |
| ***Annual IP emissions (med-equip)*** *(CO2e)  (from table above)* | ***Bed days***  *Number of bed-days per year* | ***Average emissions (med-eqiup) per bed day*** *(CO2e)* ***(=Step 5 result)*** *= Annual IP emissions (med-equip) ÷ Bed days* |
|  |  |  |

**Step 6: Carbon footprint per inpatient bed-day**

|  |  |  |
| --- | --- | --- |
| *Contributing factor* | *Carbon contribution (fill in the results from Steps 1-5)* | *% contributions* |
| *Step 1 - Medication* |  |  |
| *Step 2 - Travel* |  |  |
| *Step 3 - Energy use* |  |  |
| *Step 4 - Non-medical procurement* |  |  |
| *Step 5 - Medical Equipment* |  |  |
| ***Total:*** |  |  |

*= average carbon footprint per inpatient bed-day in your service (kg CO2 e)*

**Part C: Practical approaches to reducing carbon in a mental health service**

Mental health services in England account for 1.47 million tonnes of CO2 equivalents per year (7% of NHS total), although this figure does not include the carbon footprint of care for people with mental health problems that is provided or continued in primary care, such as the ongoing prescribing of medications, which is likely to be considerable.

This section highlights factors relevant to a mental health service, together with suggested approaches to reducing their carbon impact.

**1. Reducing carbon from pharmaceutical use**

|  |  |  |
| --- | --- | --- |
| *Suggested approach* | *Options for action (your service)* | *Actions for your service* |
| Reduce over-prescribing | *e.g. audit depot prescribing (minimum effective dose at maximum intervals)* |  |
| Stop prescribing to those who are non-compliant with medication | *e.g. monitor adherence* |  |
| Use medications developed and manufactured in EU – these have lower carbon footprint | *e.g. review local formulary* |  |
| Provide alternative care models that do not use medication | *e.g. increase access to web-based psychological interventions* |  |

**2. Reducing carbon from travel**

|  |  |  |
| --- | --- | --- |
| *Suggested approach* | *Options for action* | *Actions for your service* |
| Reduce need for travel | *e.g. Provide alternatives such as telephone clinics or Skype meetings* |  |
| Reduce distance travelled | *e.g. Provide local services where possible; GP administration of depot injections* |  |
| Increase active travel | *e.g. Provide bicycle shelters and cycle routes; promote Cycle to work scheme* |  |
| Increase public transport use | *e.g. Signpost public transport information to patients and visitors* |  |
| Increase car sharing | *e.g. Reduce parking charges for shared trips* |  |

**3. Reducing carbon from energy use**

|  |  |  |
| --- | --- | --- |
| *Suggested approach* | *Options for action* | *Actions for your service* |
| Reduce requirement for building space | *e.g. Design care models that use group-based interventions; reduce non-attendance at clinics; support flexible working/ working from home* |  |
| Reduce energy use in buildings | *e.g. ensure efficient heating/ lighting/ ventilation systems; use natural light; install motion sensors for taps and lights; run a “turn off, lights out, close doors” (TLC) campaign* |  |
| Reduce carbon from energy generation | *e.g. Install combined heat and power generation; invest in photovoltaic panels; switch to a renewable energy tariff for electricity supply* |  |

**4. Reducing carbon from business services**

|  |  |  |
| --- | --- | --- |
| *Suggested approach* | *Options for action* | *Actions for your service* |
| Sustainable procurement | *e.g. Use supplier pre-qualification, service specifications, tender scoring criteria and contract management to encourage suppliers to reduce carbon emissions* |  |
| Reduce paper use | *e.g. switch to electronic communications (internal and external) and record keeping; discontinue paper-based back-ups; reduce accessibility of printers; set default to double-sided printing; procure 100% recycled paper* |  |

**5. Reducing carbon from use of medical equipment**

|  |  |  |
| --- | --- | --- |
| *Suggested approach* | *Options for action* | *Actions for your service* |
| Reduce need for procurement | *e.g. Look after goods such that lifespan increases; review equipment for procedures to use minimum; plan procedures ahead to reduce wastage (e.g. of sterile wipes, gloves)* |  |
| Procure items with lowest carbon footprint | *e.g. Procure items locally or from the EU and those made from recycled materials where possible* |  |
| Reduce carbon from waste disposal | *e.g. Segregate and recycle waste appropriately* |  |

Key references:

Carbon Hotspots update for the health and care sector in England 2015. Sustainable Development Unit (2016).

Determining an Approach to Estimating the Carbon Footprint of Mental Health Care that is Fit for Purpose (MD Thesis). Daniel Maughan (2016)