**Worksheet 3 COPD (Facilitator Version 1.0) – Developing and prioritising improvement ideas**

Background information

The driver diagram can be used to generate improvement ideas. Using the principles of sustainable healthcare, your ideas can be structured to address the two primary drivers of sustainable healthcare, namely; reducing healthcare activity, and reducing the carbon intensity of the healthcare activity we do need.

There are usually many potential improvement ideas that can be generated for any identified problem or ideal outcome. By understanding the impact of a potential improvements (in terms of environmental, social and health outcomes) as well their feasibility, you can start to prioritise the most impactful and achievable improvement.

**Scenario**

Elizabeth is 83 years old. She is admitted to hospital via ambulance with rapid onset of worsening breathlessness. She is treated in ED for acute exacerbation of Chronic Obstructive Pulmonary Disease (COPD). She has a medical history of COPD and is a current smoker. In the Emergency Department, she is treated with nebulised salbutamol and ipratropium, oral antibiotics and oral steroids. Elizabeth is then admitted to the Care of the Elderly Ward.

She is discharged after 4 days after requiring only minimal therapy and is encouraged to continue her current regular medications. She is sent home by taxi. She has a follow-up appointment with her COPD nurse in her GP practice shortly after discharge to review her regular medication. Elizabeth is prescribed a new Metered-dose Inhaler (pMDI) Ventolin to help manage exacerbations. She lives alone in the centre of town near a busy road in a ground floor flat. She currently receives a social care package which includes one carer visit per day at her home for 30 min for a welfare check.

You notice that Elizabeth has been admitted to hospital with similar symptoms 6 times in the last year. You discuss the case with your team who tell you of many similar patients who are regularly re-admitted with mild acute exacerbations of COPD.

You decide to do an audit with your ward clerk to find out more about this problem. You discover that 200 COPD patients are admitted at least 4 times per year, with an average length of stay of 4 days. They are usually brought to the hospital by ambulance and go home by taxi after discharge. You also notice that 80% are prescribed a new Ventolin MDI inhaler on discharge, 15% are current smokers, and 30% live alone.

***Facilitator Note:*** *The purpose of this scenario is to encourage students to think about what might be the best solutions to the complex problem of chronic respiratory disease in the elderly. Learners might think about optimising therepy and low carbon swaps but should also consider alternative ways of reducing admissions such as considering the environmental factors and social factors associated with admissions. This scenario gets learners to think about avoidable and preventable hospital admissions, or ways in which the pathway could be adapted to better suit these patients. The focus should be on how we help patients like Elizabeth to avoid repeated admissions to hospital which offer little in terms of disease optimisation, but which can cause considerable distress.*

**Activity 1 – Developing improvement ideas**

**Use the editable driver diagram table (table 1) below to help you think of improvement ideas for reducing readmission cycles amongst the elderly with chronic respiratory disease under each of the principle of sustainable healthcare categories. Consider broader areas under each heading that could be tackled first (secondary drivers), and then see if you can think of specific project ideas.**

**Before you do this, have a look at the levels of prevention below, which have been reproduced from the** [**PCORE (Primary Care Online Resource and Education) online learning platform**](https://edblogs.columbia.edu/pcore/prevention/prevention-preventive-services/)**, as they may help you to think about the different types of Prevention intervention.**



**Table 1: Driver diagram table: Developing improvement ideas for reducing the environmental impact readmission cycles amongst the elderly with chronic respiratory disease**

|  |  |  |  |
| --- | --- | --- | --- |
| **Intended Outcome**  | **Primary Driver – We need to ensure …** | **Secondary Driver – Which requires** | **Project ideas – Broad ideas or specific projects**  |
| Minimising the Environmental, social and financial impacts of re-admission cycles in the elderly with Chronic respiratory disease | **Reduce Activity** | 1. Prevent avoidable disease | Optimise treatment and technique |
| Consider causes of exacerbations |
|  |
| 2. Empower patients to improve disease management | Improve access/refer to social groups  |
| Improve social networks |
| Enhance paramedic and GP response and triage |
| 3. Ensure lean clinical pathways/systems | Geriatrician or respiratory review in A+E |
| Early optimisation of disease and social support  |
| Avoid unnecessary investigations |
| Reduce Carbon Intensity | 4. Switch to lower carbon alternatives | Swap to dry powder inhalers when appropriate |
| Offer telephone follow up and review were appropriate |
|  |
| 5. Improve operational resource use (e.g. equipment, energy, water)  | Ensure inhaler recycling facilities |
| Greener energy supply  |
| Recycle and reuse materials  |

**Activity 2 – Prioritising improvement ideas**

**Task: Score the impact and feasibility of improvement ideas for reducing readmission cycles amongst the elderly with chronic respiratory disease.** Take each improvement idea in turn, and give it a score from 0-3 (0=no impact, 3=highest impact). You might also want to think of your own idea and add it to the list, using the principles of sustainable healthcare to inspire ideas.

Write your answers in the **Prioritising improvement ideas table 1. below**. (Please appoint a scribe in your group and someone to feedback your answers when you return to the whole group).

***Facilitator note:*** *Encourage students to think about each of the outcomes in an overall, general sense. The main task is to appreciate how social, health and environmental impacts may differ by intervention and to think about how to weigh these up with feasibility. One example has been added, and others should be added from activity 1 above. Try to select a variety of idea types, from easier to more advanced project ideas.*

**Prioritising improvement ideas table**

| Opportunity | Health Impact (0-3) | Environmental Impact (1-3) | Social impact (1-3) | Feasibility (1-3) |
| --- | --- | --- | --- | --- |
| *e.g.Address social isolation* |  |  |  |  |
|  |  |  |  |  |
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