Investigating the viability of a blue green prescribing strategy in the Scottish health system: research protocol

Julius Cesar Alejandre[1,2], Katherine Irvine[2], Sebastien Chastin[1], Lesley Price[1], Sharon Pfleger[3], Judith Singleton[5], Rachell Helliwell[4], and Karin Helwig[1]

[1]Glasgow Caledonian University, [2]The James Hutton Institute, [3]National Health Service Highland
[4]Centre of Expertise for Waters, [5]Queensland University of Technology

Email: juliuscesar.alejandre@gcu.ac.uk   Twitter: @JulzeAlejandre
www.hydronationscholars.scot

Scottish Government gov.scot
Hydro Nation Scholars Programme

Introduction

The healthcare sector makes a significant contribution to greenhouse gas emissions (GHG), e.g. NHS England (3% of England's total GHG emission, 21% of which from pharmaceutical acquisition) (Brown et al., 2012; Sustainable Development Commission, 2008).

Active pharmaceutical ingredients pose a serious risk to waterbodies (Kummerer, 2009).

Environment sensitive health strategies are needed to reduce pharmaceutical concentrations in the water environment without compromising population health and wellbeing, e.g. prescribing blue space interventions and eco-directed pharmaceutical prescribing (Britton et al., 2020; Daughton, 2014).

Aims & objectives

Investigate the feasibility of prescribing blue space interventions and green pharmaceuticals in selected Scottish NHS Health Boards following the initial key steps of implementation science-based research

a. Synthesise current evidence on prescribing blue space interventions and green pharmaceuticals in healthcare settings

b. Map out stakeholders and analyse their influence and interest in adopting blue green prescribing

c. Determine and analyse stakeholders' viewpoints, motivations, behaviours, and perceived enablers and barriers in adopting blue green prescribing

d. Develop a tool that will guide healthcare providers in prescribing blue green interventions in routine healthcare practices

Methodological approach

Implementation science → Knowledge translation → Stakeholders mapping and analysis → Exploratory mixed-methods → Q-methodology (viewpoints analysis) → Tool guide development

Research impact

Develops a robust evidence base on the prescribing mechanism of blue space interventions and green pharmaceuticals in healthcare settings.

Identifies perceived barriers and enablers to key stakeholders in the adoption of a blue green prescribing strategy in NHS Scotland.

Promotes to stakeholders the sustainable and rational use of blue spaces and green pharmaceuticals for wellbeing purposes, with emphasis of its impact on related SDGs (Figure 1).

Proposes a context-based tool guide for prescribing blue space interventions and green pharmaceuticals within NHS Scotland's routine healthcare practices.

Figure 1. The Blue Green Prescribing Strategy and its impact on related Sustainable Development Goals (SDGs)

GCU Glasgow Caledonian University
University for the Common Good
The James Hutton Institute
CREW CENTRE OF EXPERTISE FOR WATERS
NHS Highland
QUT