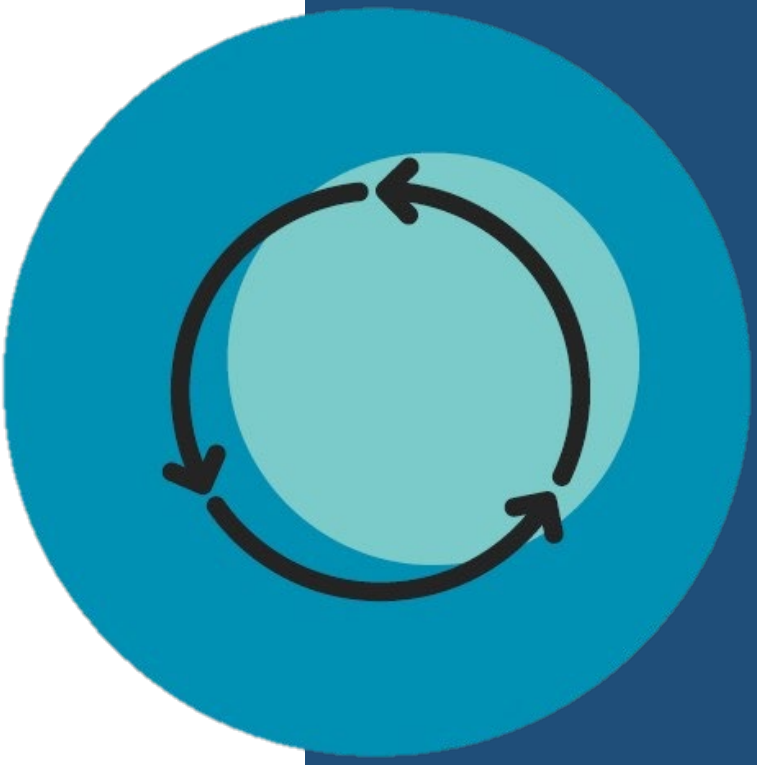
2022-2023

Circular Health Care:

An opportunities guide for health care organizations in B.C.



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Scope

While this Guide was created by the Energy and Environmental Sustainability team who support operations within Fraser Health, Providence Health Care, Provincial Health Services Authority and Vancouver Coastal Health, the general guidance related to the direction health care needs to go to become more circular is broadly applicable to all B.C. health care organizations.

Vision and Guiding Principle

Health care will always produce some waste since biomedical waste is unavoidable in the provision of health-care services and some non-hazardous waste cannot be diverted due to infection prevention and control guidelines and patient care priorities. For the purposes of this Guide, **the vision is zero avoidable and unnecessary waste** that we strive to embed in all areas of health care.

In order to move toward the vision of zero avoidable and unnecessary waste, we look to the **guiding principle of a circular economy**, in which we do not rely on extraction of raw resources, but first use what already exists.

Disclaimer

The Energy and Environmental Sustainability (EES) team recognizes that this Guide has not been developed by a third party or with an objective perspective on these topics. The content of this document is based on the observations, engagement, reflections and analysis of the EES team, who have motivation to drive environmental sustainability initiatives.

The EES team requests that any individuals or departments reading this report help to identify any gaps that may contribute to a greater understanding of the role of circular economy within B.C. health-care organizations.

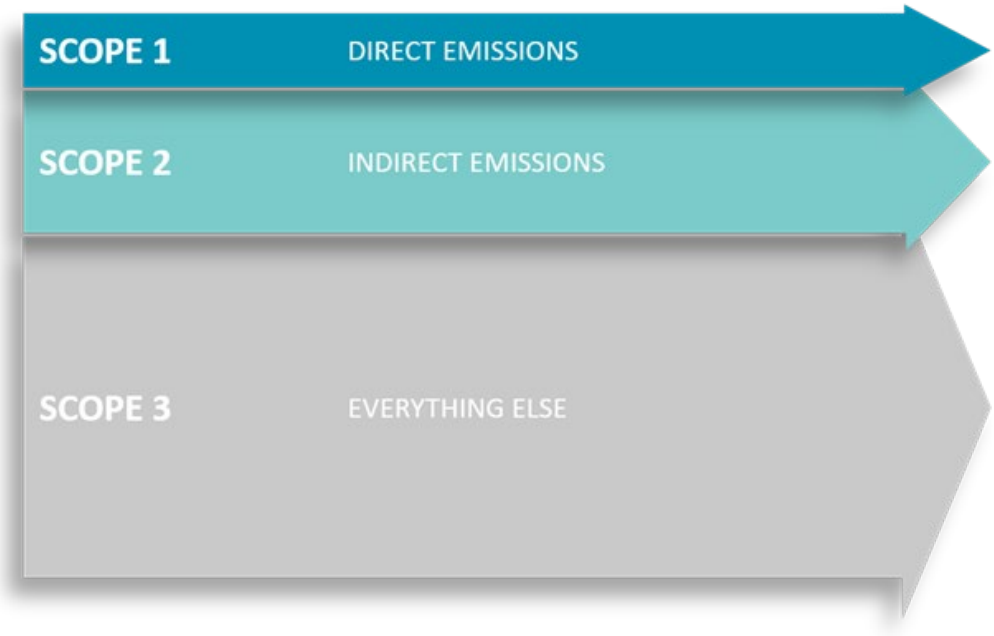
HEALTH CARE'S CARBON FOOTPRINT

Climate change and its associated environmental and human health problems are our current global reality – a reality that we must all take action to address. Health care is responsible for 4.6 per cent of Canada's total greenhouse gas emissions and as such, contributes to and is impacted by our climate reality[1].

In B.C., all health-care organizations are mandated to be carbon neutral and achieve this through emissions reductions initiatives and paying annual carbon offsets[2]. But currently we are not reporting on, or paying for, all of our emissions. Greenhouse gas emissions are split into three scopes:

Scope 1	**Direct sources** including mobile combustion from fleet vehicles and stationary combustion from boilers
Scope 2	**Indirect sources** including purchased electricity
Scope 3	**Everything else** including the products we buy, staff commutes, business travel and waste

B.C. health-care organizations report on and pay for Scopes 1 and 2, but not Scope 3. And unfortunately, Scope 3 emissions make up an estimated 61 per cent of Canada's health care emissions[3].



EMISSIONS ARE NOT THE FULL STORY

Greenhouse gas emissions are a good way to measure and report on health care's environmental impact, but it doesn't cover all types of impacts. Resource extraction to create products from virgin materials causes the destruction of ecosystems and the depletion of limited natural resources[4]. In addition, the overuse of single-use plastics in health care leads to unnecessary exposure to toxic chemicals and an excessive accumulation of plastic waste in landfills. A more detailed examination of the impacts of plastics in health care can be found in "Researching a Circular Economy of Plastics in Health Care".

We cannot limit our conversations about reducing health care's negative environmental impact only to emissions, at the risk of overlooking other key imperatives. A circular economy model is a good fit to understand environmental impacts and benefits beyond simple emissions reductions. A circular economy emphasizes the reuse, sharing and repurposing of goods; discourages and delays disposal of goods in landfills; and creates new economies for sharing and recycling. A circular economy is based on the principles of designing out waste and pollution, while keeping products and materials in use, and regenerating natural systems[5]. More about the circular economy can be found later in this Guide.

WASTE GENERATED IN HEALTH CARE

How much waste are we talking about?

Approximately 13 kilograms, or 29 pounds, of waste is generated per patient per day[6]. Based on data collected from several B.C. acute and long-term care facilities, approximately 58 per cent is garbage, 34 per cent is recyclable (including organics) and 8 per cent is hazardous waste (which is autoclaved or medically incinerated)[7].

Hazardous vs non-hazardous waste

Priorities and opportunities differ between hazardous and non-hazardous waste. In health care, hazardous waste includes anatomical, non-anatomical, cytotoxic, sharps, pharmaceutical and chemical waste[8]. For hazardous waste streams, the priority is proper segregation so non-hazardous waste does not end up in the hazardous waste stream. Biomedical waste is more costly, and while it only makes up on average 8 per cent of the total waste stream, it can count up to 40 per cent of the waste management costs[9]. By ensuring that only hazardous waste is going into the proper containers, and all non-hazardous waste is segregated into other appropriate streams, the health organizations will save on costs and reduce environmental impact from waste treatment.

This Guide is mostly relevant for non-hazardous waste streams, as they are better suited to be viewed through a circular economy lens.

Construction and deconstruction waste

In addition to waste generated in the operations of providing care, health care has a responsibility to address waste generated by constructing, renovating and deconstructing its facilities. This is best addressed through procurement with a requirement for contractors to segregate, track and report on all construction and deconstruction waste generated.

Recycling alone is not the solution

Many B.C. facilities will have the ability to recycle cardboard, paper, mixed containers and, to a lesser extent, organics, although it is important to note that availability of recycling services varies greatly throughout the province. Recycling is easier in non-clinical spaces, but recycling programs do exist in many clinical areas. While health-care facilities should strive to maintain and improve their recycling programs, much is beyond the direct control of the organization. Health-care waste presents a unique challenge for recycling providers.

1. **The global recycling market is shrinking**. Changes in international recycling market conditions were triggered by China changing their recycling import regulations from 2013-2018[10]. These regulations effectively banned low quality plastic imports (such as soft plastic packaging) and severely limited imports of plastics. Now the vast majority of recyclable plastics have to find buyers within North America.

2. **There are provincial recycling industry limitations.**
   There are limited recycling service providers available in the region. Health organizations hire private commercial recycling providers, which is separate from the B.C. municipal recycling program that is funded by the businesses operating in the province.
   Biomedical contamination incidents, such as needles in the recycling and blood products in the landfill, have led to bans and loss of recycling contracts. Because of the potential for biomedical contamination, there are limitations to what can be recycled, due to safety concerns for staff at the recycling facility who sort recyclables by hand.

3. **Health organizations must comply with provincial and municipal bylaws**, including the increasing number of materials banned from the landfill (e.g. organics, e-waste, batteries, and lighting). There are fines for sending banned materials to landfill, so disposal costs can be reduced by closely complying with the bylaws. Bylaws also influence the type of materials available to the health organizations. For example, despite high interest in plastics labelled compostable as an alternative to fossil fuel-based plastics, B.C. composting systems do not support the composting of these bioplastics and they are considered a contaminant in both recycling and organics collections[11].

4. **The use of plastics in delivery of care is ubiquitous and complex.** Some single-use plastic items and packaging are necessary during transportation and storage to reduce risks from the spread of infection and disease. Often results in multiple layers of packaging. Cleaning and reusing some plastic products is not possible due to time constraints in patient care processes, or because they are too difficult to clean and safely use again, such as plastic tubing. Health-care product packaging material is difficult to recycle due to all the different types of plastic, paper with plastic content, and other various mixed materials.

Targeted Recycling Opportunities

Waste management and recycling should not be ignored in the shift to a circular economy and despite years of standardized recycling programs, there are still many opportunities within health care to divert waste from landfill and to better track our waste diversion progress. This section reviews priority actions related specifically to recycling.

Priority actions

New recycling streams

Based on waste composition audits completed at B.C. acute and long-term care facilities, four categories have been identified as high-volume with potential for diversion:

1. **Polyvinyl chloride (PVC) products** such as oxygen masks, oxygen tubing, and empty IV bags;
2. **Sterilization wrap**;
3. **Disposable personal protective equipment** (PPE) such as masks, hairnets, booties, isolation gowns, and gloves; and
4. **Compostable items** such as paper towels in the washrooms and handwashing stations, and lunch room food scraps.

There are identified barriers to the collection of each category – both internal capacity and budget limitations, and external recycling market challenges – however efforts should continue to determine feasibility and interest because the positive impact of diverting these materials is high. In Lower Mainland facilities alone, diverting PVC, sterilization wrap, disposable PPE and compostable items from the garbage has the potential to remove 6.3 million kilograms of waste from the landfill annually and increase average waste-diversion rates from 37 per cent to 71 per cent[12]. In reality, 100 per cent diversion of these four categories is not feasible, but at the very least these findings demonstrate the potential for progress toward increasing waste diversion.

Better data collection

There are some streams of recycling that are being collected, but data is not tracked. The current waste diversion results are based on the blue bin collection program, including Mixed Containers, Mixed Paper, cardboard, and organics. Other recycling streams such as batteries, scrap metal, expanded polystyrene (Styrofoam), plastic film (i.e. pallet wrap), mattresses, and pallets have high volume but are not included in the dataset. A 2018 research project of several Lower Mainland hospitals showed that adding data from these existing recycling streams into the waste diversion calculations could add several percentage points to the result[13]. This means that the facilities are recycling more than they are reporting.

This data should be properly captured and included in health organization reporting. This can be achieved by standardizing recycling providers whenever possible and including contractual requirements for providers to report monthly collection data.

Recycling has its place, but should be the last step to addressing the issue, with the priority to avoid the generation of waste in the first place. This is best accomplished by transitioning to a circular economy.

WHAT IS A CIRCULAR ECONOMY?

In the current economic model, referred to as a linear economy, raw resources are extracted for production and products are disposed of at high rates. The link between human behaviour, driven by a linear economic model, and climate change is undeniable. As a recent report from the United Nations' Intergovernmental Panel on Climate Change stated, "it is unequivocal that human influence has warmed the atmosphere, oceans and land"[14].

An alternative model, known as a circular economy, would emphasize the reuse, sharing, and repurposing of goods, discourage and delay disposal of goods in landfills, and create new economies for sharing and recycling. A circular economy is based on the principles of designing out waste and pollution, while keeping products and materials in use, and regenerating natural systems[15]. The journey toward greater circularity can be helped by asking guiding questions, as seen in Figure 1.

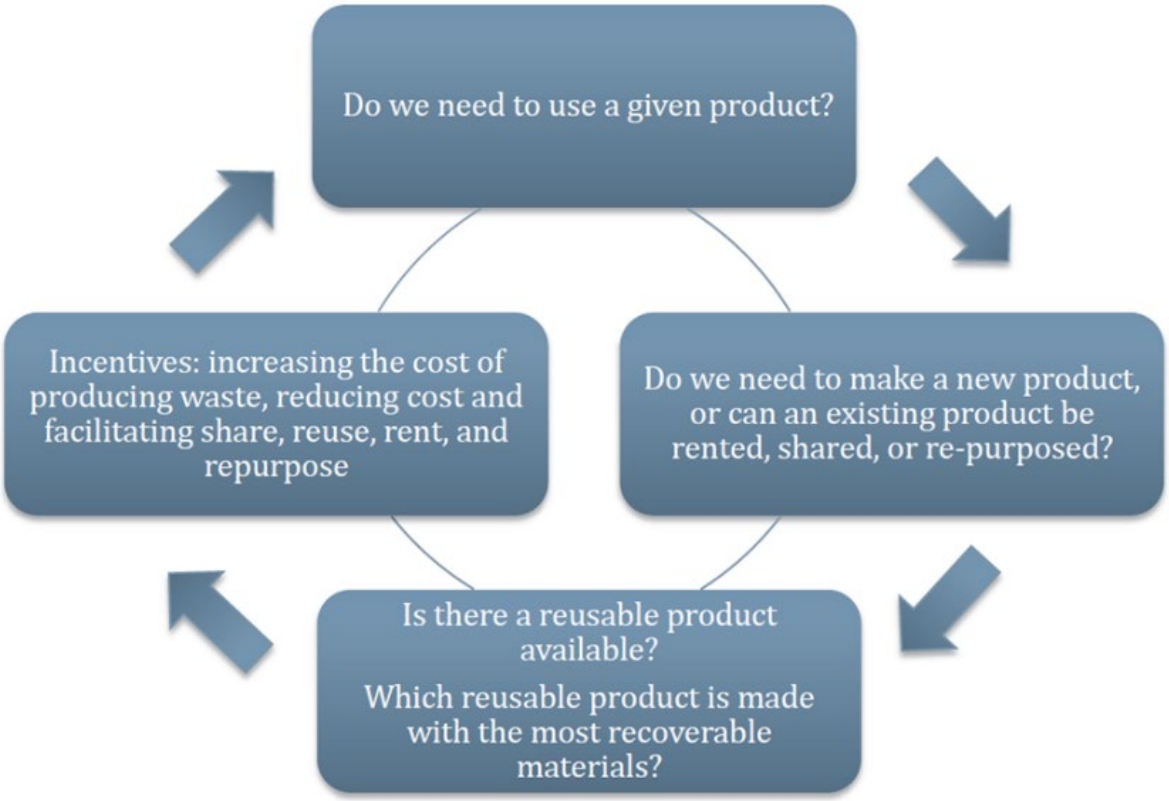


Figure 1. Circular Economy Diagram[16]

HOW DOES A CIRCULAR ECONOMY FIT INTO HEALTH CARE?

Health care's participation in a circular economy would provide a major opportunity to receive direct benefits for the sustainability and efficiency of the delivery of health-care services and indirect benefits from reducing harmful environmental impacts of hospital-generated waste[17].

The various points of intervention to turn a linear economy more circular can be seen in Figure 2.

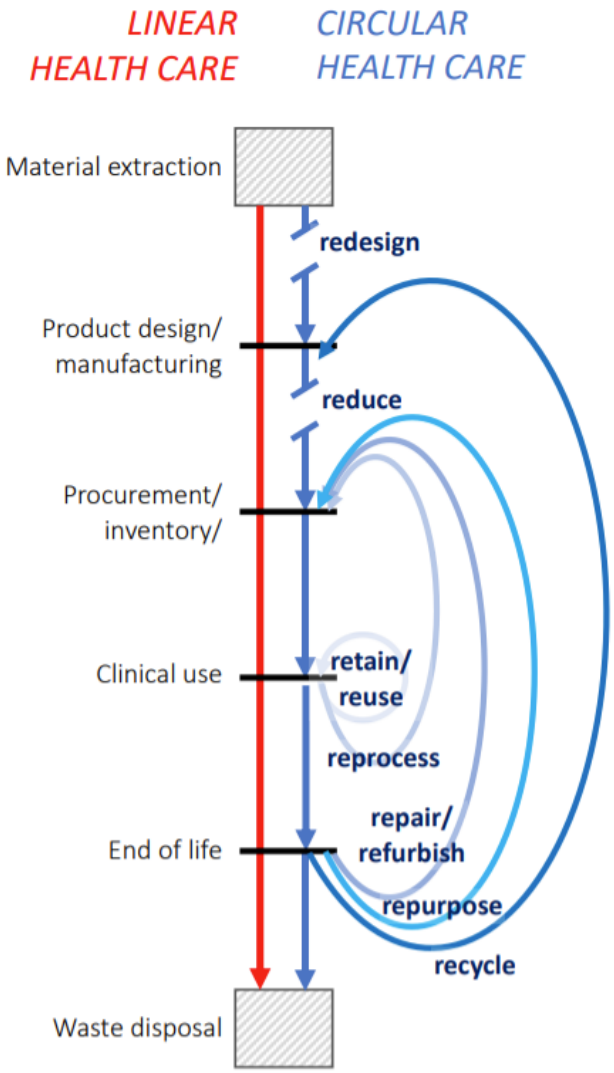


Figure 2. Structure of a Linear and Circular Health Care Economy[18]

The benefits of transition to a circular economy include:

- Reduced emissions, waste, and extraction of finite natural resources;
- Supply chain reliability and security;
- Cost savings;
- Improved health and well-being;
- Reduced health inequity.

A more detailed examination of the benefits of a circular economy can be found in "Circular Economy in Health Care: Communicating to non-experts in a persuasive way".

The actions we take toward greater circularity are organized in a waste hierarchy, with the more impactful actions at the top, as seen in Figure 3. The most impactful action is to prevent waste entering the system in the first place, followed by reuse, then recycling. Energy recovery and disposal in landfill are the least preferable actions.

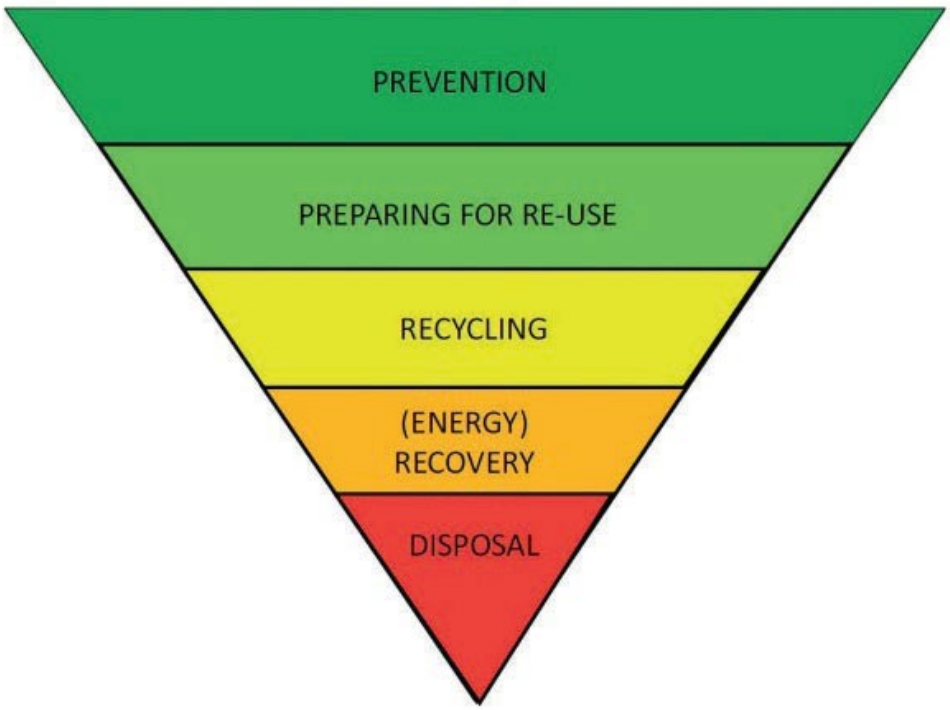


Figure 3. The Waste Hierarchy[19,20]

CIRCULAR PRIORITIES

The vision is zero avoidable and unnecessary waste in the health-care system by fully optimizing avoidance, reduction, reuse, and recycle strategies. Health care needs to integrate circular economy principles and practices into all relevant departments to prevent waste from entering the system, to keep materials in use as long as possible and to recover those materials at end-of-life through recycling or composting.

Many different actions and interventions will contribute to making health care more circular, but there are four high impact circular priorities:

1. Circular Procurement
2. Sharing Economy
3. Build for Circularity
4. Clinical Process Change

1. Circular Procurement

Research has shown that 70-80 per cent of total health-care emissions come from the supply chain, which emphasizes the urgent need to shift the health care to look upstream to a more circular procurement model[21,22].

Reusables First

Becoming a Reusables First organization means that a reusable product is considered before making a purchasing decision. Multiple life cycle assessments across various product categories and geographic regions show that reusables are much more environmentally preferable over disposables[23,24]. It is also often the case that on a per use cost, reusables end up being cheaper over the life span of the product[25].

Switching to a reusable product delays disposal of goods into landfill or recycling and contributes greatly to a circular economy.

Priority Actions

We can prioritize the switch to reusables in three different categories: medical products; personal protective equipment and sterilization; and non-clinical operations.

Medical Products

The idea and implementation of reprocessing medical devices is not new but the rate of its implementation across Canada is low[26]. While the shift over the years to disposable medical products has greatly impacted market availability of reusable options, there are many medical products available in a reusable version. Some examples include laryngeal mask airways (LMAs), laryngoscope blades and handles, endotracheal tubes, pulse oximetry probes, blood pressure cuffs, and patient warming devices.

We can use procurement to facilitate the switch to reusables. For this to work we must include clinician engagement and education to promote the environmental, cost, and patient care benefits. We need additional knowledge and expertise to navigate the regulatory landscape of reusables, and to embed infection prevention and control requirements into their clinical use.

Personal Protective Equipment and Sterilization

In general, health care has already been shifting to reusable isolation and surgical gowns. For example, within Providence Health Care, St. Paul's Hospital is now using 100 per cent reusable isolation and surgical gowns and data from February 2021 shows that Fraser Health is averaging 91 per cent reusable isolation gown usage and only 9 per cent disposable. There are also clear cost savings to the switch to reusable gowns, since reusable gowns are nine times cheaper based on a per use cost[27].

With the shift to reusable gowns well underway, there are other PPE and sterilization categories that will also benefit from switching to reusables: respirators, reusable masks for non patient-care areas, reusable sterilization cases for medical device reprocessing, and reusable drapes. Within drapes we should first focus on furniture drapes such as mayo stand, back table, and ¾ covers, as they are less likely to be cut during a procedure.

Non-clinical Operations

Food and nutrition services is full of opportunity to increase circularity, including offering reusable service-ware, water bottle refill stations, and purchasing food with less plastic packaging.

Several Vancouver Coastal Health sites have previously piloted a Choose to Reuse program, where the cafeteria offered reusable to-go containers with a deposit fee. Staff would bring the containers back to the cafeteria once finished for cleaning. While the Covid-19 pandemic halted most reusable service-ware initiatives, a recent report from the National Zero Waste Council indicate that reusables in food services, even during the pandemic, can be safe to use[28].

Procurement Model Innovations

The current procurement models in use rarely allow for innovative agreements with vendors that would both support a circular economy and provide cost and resource savings. Extended producer responsibility and leasing and service models are two ways Supply Chain can better embed circular economy from the very beginning.

Priority Actions

Extended Producer Responsibility

Waste first enters the health system through procurement and the health organization is left to manage and pay for waste management services. One way to counter this is to ask for extended producer responsibility in procurement processes. Extended producer responsibility (EPR) is an obligation for vendors to take responsibility for the environmental impact of their products and packaging. Responsibility could take the form of simply paying for waste management services or through take-back programs where the vendor would actually take the equipment or waste back in a diversion program. It encourages responsible design and packaging waste reduction since the vendor is now responsible for waste management.

EPR questions should be included in all product procurements and, if applied successfully, would result in cost and waste savings for the health organizations.

Leasing and Service Models

Known as servitization, this is the shift from product ownership to a leasing or service model. The Canadian National Zero Waste Council identified equipment servitization as a key intervention for waste prevention in health care[29]. Servitization shifts the ownership of assets back to the manufacturer while the health organizations would set up a leasing and service agreement. This model promotes function and performance over sales and incentivizes manufacturers to design durable products that can be easily repaired, disassembled for parts, and recycled at end-of-life.

2. Sharing Economy

A sharing economy is the concept that assets and resources that are either unused or under-utilized are provided to those that need them. Sharing can be temporary, as in a rental, permanent as in the case of donations or through agreements where two or more parties have access to one resource rather than each obtaining their own. Asset sharing is gaining traction across various sectors, and it has recently become of interest for application in health care due to its potential to save effort and costs while reducing unnecessary waste.

Priority Actions

Asset sharing platform

An asset sharing platform allows organizations to match supply with demand for medical products and excess stock. Items can be offered free of charge or for a price, can be shared internally or externally, and can be exchanged permanently or simply rented out. Organizations that use asset sharing platforms have observed cost savings and tangible waste reduction[30].

The Canadian Coalition for Green Health Care has already partnered with FLOOW2 Healthcare to offer the Health Share platform for Canadian health organizations. This platform should be explored for use in the health organizations in collaboration with key stakeholders including Facilities Maintenance and Operations, Infection Prevention and Control, and site and health organization leadership.

Donation and food rescue

Donation of un-needed medical supplies and furniture has been happening organically throughout the province. Often it happens during a renovation where the space needs to be cleared out of existing assets. Charity organizations such as Rotary World Help will be called and allowed to pick up the items they are in need of, to later donate to countries in need. This can be a good course of action, however there is no standard process or transfer of information from project to project about the ability to donate assets. It often falls to project leads to do their own research every time. Instead, a set process should be put in place where all project teams are aware of the donation options available to them, and what the exact process is to donate.

Similarly, food rescue has been rapidly undertaken in restaurant and hospitality industries, but has not experienced similar success within health care. While barriers do exist to food rescue and donation, they are not insurmountable and are both key interventions to reduce waste and contribute to community and social responsibilities.

3. Build for Circularity

It is always important to adjust existing operations to become more circular, but in the long term the greater impact lies in designing new systems and ways of working. The first and most important tactic toward a circular economy is to rethink the design our buildings to support the change. The focus for build for circularity lies in how we design and use space in new capital projects.

Priority Actions

Designing spaces to support circularity

Some of the other priorities listed above are best executed if planned for and included in new building design. While reusable products may not require significantly more storage space compared to disposables, the storage and flow of reusable products should be considered upfront in order to optimize operations. Assets that are no longer needed and are waiting to be shared will require a holding space, one of the major barriers to implementing an asset sharing system immediately.

Two key space considerations are the Medical Device Reprocessing Department (MDRD), as they need additional space and capacity to process reusable surgical devices, and the food services department, as they need additional space and infrastructure to wash and store reusable service-ware.

Design considerations need to be included pre-business case to ensure that there is adequate budget and attention paid to these changes before the building design process is too far underway. This highlights the need for additional engagement with capital project managers, equipment planners and space planners.

More information about space design recommendations relevant to the detailed design phases of projects can be found in the Low Carbon Resilience and Environmental Sustainability Guidelines for Health-care New Construction.

Design for disassembly

Designing for disassembly is one of the most impactful design decisions to decrease future facility infrastructure waste. Planning for the end-life of individual infrastructure components within life-cycle projections can mitigate future environmental impacts, costs, and inefficiencies associated with replacement or retrofit requirements for entire systems.

Designing for disassembly includes designing and selecting materials, equipment, and components that:

- Are upgradeable
- Are repairable
- Are replaceable without affecting the surrounding components
- Can be separated into components and waste streams for end-of-life disposal and reuse

4. Clinical Process Change

It is important to acknowledge the importance of clinical process and decision-making to overall waste generation. Clinical process change is complex and requires multiple stakeholders in the room including clinicians, Infection Prevention and Control, Quality and Patient Safety, Professional Practice, Environmental Vendor Services (Housekeeping), and others. However, it can have large positive impacts on waste prevention.

Priority Actions

Embedding goals

Embedding waste prevention and reduction goals into the Quality and Patient Safety team will bring the topic to the table and ensure conversations start to happen with the right stakeholder groups. Communication and goal-setting is the first step, before new actions can be identified. However, there are existing examples of process change, a few of which are outlined here[31].

Inhaler process change

Unnecessary waste is generated by the current use of multi-dose inhalers. As their name suggests, multi-dose inhalers can be used many times over, often for weeks or even months at a time. However, it is a common occurrence that patients are discharged from the hospital well before they finish their inhaler. This problem can be solved in one of two ways:

1. A patient may use their own inhaler brought from home. One attempt to quantify the cost benefit of using the patient's own medication on several surgical wards showed real savings. The benefit was expressed as the cost savings of the drug minus the labour costs for pharmacists to ensure that the patient's own drug was appropriate to use. On average, there was a net cost saving of $40 per patient and $19 per drug[32].
2. Allow patients to continue using their hospital inhaler after discharge. Currently, hospital inhalers are not allowed to be taken home as they constitute a hospital expense, which means many inhalers become unnecessary waste. If they could be taken home, the inhalers would presumably be used until empty, saving the patient money and reducing overall waste. This solution has yet to be implemented and can be considered for the future given changes in hospital procedures and policy.

Breast pump process change

Manufacturers of breast pumps recommend using a new, single-use plastic breast pump each time a pregnant person pumps breast milk, totaling up to eight breast pumps used in a 24 hour period. Maternity staff in a Lower Mainland hospital instead created a system where parents are advised to reuse these breast pumps for the duration of the pregnant person's hospital stay if their baby is healthy. Nurses provide sterilization packages and make sure there are sufficient wash basins in each room so that post-partum patients are easily able to wash their breast pumps.

There have been very few complaints about the reuse process of the breast pumps, and patients always have the option to ask nurses for a new pump if they wish. While the reuse of the breast pumps creates more work for the nursing team, since they have to dedicate time to teach the new parents or wash the pumps themselves if the patient is unable to, the nurses accept this process as part of their routine work.

SETTING PRIORITIES AND TARGETS

This Guide is meant to help B.C. health-care organizations become more circular by introducing the four key priorities: Circular Procurement, Sharing Economy, Build for Circularity and Clinical Process Change. Each organization should then decide which priorities to focus on and create strategies, timelines and metrics for each one. Once metrics have been determined, targets should be set to track progress. These will be different for each health organization, as each will have different priorities and strategic directions.

FEDERAL, PROVINCIAL AND REGIONAL ALIGNMENT

Multiple regulations impact and shape the work to embed circular economy, environmental sustainability and low carbon resilience into health care.

Federally:

- The *Canadian Environmental Protection Act 1999* mandates responsible disposal and pollution prevention[33].
- *Canadian Net-Zero Emissions Accountability Act 2021* commits Canada to reduce greenhouse gas emissions by 40-45 per cent below 2005 levels by 2030, and has committed to net zero emissions by 2050[34].
- *Ocean Plastics Charter* commits Canada to ensure plastics are designed for reuse and recycling and to adopt a lifecycle approach to plastics stewardship[35].

Provincially:

- The B.C. *Climate Change Accountability Act 2007* requires all public sector organizations to measure and report on Scope 1 and Scope 2 emissions, reduce emissions, and pay carbon offsets[36].
- *Clean BC* includes recommendations to reduce waste and turn it into a clean resource. The recently released Clean BC 2030 roadmap to net zero emissions commits to creating a 2022 Circular Economy Strategy, to which the health organizations should align[37].
- The Ministry of Health released two new policies in 2021, included in the Health Capital Policy Manual, which apply to health authorities when acquiring, designing, building, procuring and using health capital assets. *Policy 11: Environmental Sustainability and LEED Gold Certification*, requires health authorities to "minimize the use of…waste" and use sustainability targets.

Municipally:

- Health-care facilities comply with municipal rezoning policies, waste guidelines and landfill bans. For example, the City of Vancouver *Rezoning Policy for Sustainable Large Developments* requires the creation of a Zero Waste Design and Operations Plan[38].

Internally:

- The B.C. health authorities generally have an environmental sustainability policy that commits them to act as leaders with respect to environmental stewardship and work to develop and adopt sustainable best practices[39].

GUIDE DEVELOPMENT AND CONSULTATION

This Circular Health Care Opportunities Guide is a living document and requires additional input and co-development from key stakeholders for sponsorship and to operationalize the recommendations and key actions. In light of the newly released Clean BC Roadmap to 2030 and the announcement that B.C will create a Circular Economy Strategy in 2022, now is the time to bring the Circular Health Care Opportunities Guide to health organization leadership so health care is ready for future provincial direction.

Partners

For this work to be successful, the entire health-care community needs to be involved. Some key stakeholders and partners include:

- Health organization senior and executive leadership
- Health organization board
- Finance
- Infection Prevention and Control
- Quality and Patient Safety
- Professional Practice
- Business Initiatives and Support Services
- PHSA Supply Chain
- Ministry of Health
- Ministry of Environment
- Health-care staff
- Clinicians
- Environmental sustainability staff
- Facilities Maintenance and Operations
- Capital projects teams
- Municipalities

SYSTEMS CHANGE

Policy Support

Procurement is a key tactic for almost all the priorities in this Guide, and the creation of a sustainable procurement policy that all B.C. health organizations agree to will be key to justify and back up the work. PHSA Supply Chain guides procurement processes, but relies on the input of the health organizations via committees to make final decisions. A sustainable procurement policy will support the operationalization of circular economy considerations in procurement processes.

Embedding Change

"Knowing that only about 20 per cent of overall health status is determined by health care, this means pushing for measures that make life outside of the hospital stable, clean and equitable"[40].

The priorities and actions outlined in this Guide involve long-term systems change and must be supported at all levels of the organizations. The change to a more circular health-care system can be amplified by embedding environmental sustainability and low-carbon resilience responsibilities in all job descriptions and leadership team accountabilities. The Energy and Environmental Sustainability team is driving the push but cannot do it alone. Success will be a product of the entire health-care community.

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