Common Questions About Equipment and Stock in Vision Centres

Equipment and Stock in Vision Centres.

This is one of the most contentious issues in setting up vision centres. Equipment and stock can be one of the most expensive parts of setting up a vision centre. Yet poor quality stock or equipment is can cause irreparable damage to the perception of a vision centre in the community. For example, a vision centre that stocks poor quality frames may develop a poor reputation in the community for providing 'spectacles that always break'. Alternatively, if poor quality equipment is sourced, this can lead to poor quality spectacles being produced, or long turnaround times if the equipment breaks, or cannot cope with the quantity of work put through the centre.

It is important that equipment chosen for the centre is appropriate for the centre. Issues to consider include the cadre and capability of the person using the equipment, the expected through-put of the centre and the operating environment of the equipment

The cadre and capability of the person using the equipment

It is important that equipment purchased for the centre is appropriate for the abilities of the person using the equipment (or that training is provided for the person to be able to use the equipment). It is important that equipment is provided so that the person can practice their profession effectively, however that excess equipment is not purchased. For example, the person to staff the centre has no knowledge of binocular vision, then the purchase of prism bars is a pointless exercise. Likewise a Goldmann or Perkins tonometer is unusable if the cadre is unable to use diagnostic drugs. Conversely, if the person has even basic low vision capability, the provision of basic low vision equipment (eg Halberg clips) will allow a greater scope of practice, potentially allowing more people to benefit from the vision centre.

The expected throughput of the centre

The expected throughput of the centre is important to consider in order to understand the workload that the equipment will be subjected to. In a very busy centre, it may be worth considering backup equipment for critical pieces of equipment, in order to reduce the effect of the equipment that has malfunctioned. In addition to this, understanding the workload of a piece of equipment can give valuable information about the type of equipment required.

For example, if the centre is to be in a rural area, and only minimal custom made spectacle usage is expected, it may be worth considering only hand edging. Whilst this is time consuming, a hand edger is a very reliable piece of equipment, and is cheap to purchase. Yet if the centre is expected to be busier, a patterned edger, or even a patternless edger should be considered.

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The operating environment of the centre

The operating environment of the equipment is also important to consider. For example, is there a water supply to the centre? Is the electricity supply reasonably stable or should battery operated equipment be considered? If using battery powered equipment, are rechargeable batteries an option to reduce waste?

Is the centre one of a group of centres? Can the spectacle supply be centralized to one centre in order to minimize cost, whilst still maintaining good turn-around times? If the centre is a single centre, does it have networks to good, local suppliers? If not, should the centre hold an expanded range of lenses, in order to minimize turnaround time?

Common Questions about Equipment and Stock in Vision Centres

Seed stock will need to be purchased for the Vision Centre. This may include frames for custom-made spectacles, lenses, readymades and other consumables. It is important to make key decisions about stock in the project plan early as this will influence the equipment that is purchased and the training that is done. The following is a discussion of some of the more common decisions that need to be made about stock and equipment.

1. Hand edger vs Patterned edger vs patternless edgers?

This is a difficult question. On one hand, patterned edgers are cheaper and less prone to breaking down. On the other hand, patternless edgers are easier to use, faster, more accurate, and don't require the purchase of either a template cutter or templates.

2. Should the centre fit rimless mounts?

Rimless mounts (or rimless frames as they are commonly known) are very popular in many regions, however they are fragile, require specialist equipment to fit (drilling machine), specialised lenses (high index lenses) to ensure that they do not break, and specialised training to fit them. In view of this, generally, rimless mounts are not fit in Vision Centre workshops, however if the decision to stock rimless frames is made, it is important that the workshop has equipment to be able to fit them, and staff that have the expertise to fit them.

3. Nylon frames (semi-rimless).

Semi-rimless frames are again popular in many regions, however require specialised equipment (groover) and specialised training to fit and dispense. If the decision to stock semi-rimless frames is made, then a groover must be purchased, and staff need to receive specialised training on how to fit them, and how to dispense them.

4. Range of frames to stock.

It is useful to consider a standard range of frames for the Vision Centre, particularly if there is a single optical workshop servicing several Vision Centres. There are several reasons for this. Firstly, it allows all stock to be held in the central optical workshop, with the Vision Centres only holding the standard range of frames as samples. The Vision Centres can then fax or email their orders

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through to the workshop, saving on delivery charges. Secondly, if a patterned edger is used, it also means that a standard range of patterns can be used, reducing the cost of the creation of a pattern for every frame. Finally, a finite number of styles will reduce the amount of time the dispensing staff need to spend on helping people to choose frames, increasing efficiency.

If a standard range of frames is made, it is important to ensure that there is adequate selection in the standard range. The following are some of the considerations that should be taken into account when choosing a standard range of frames.

- *Size:* Ensure that there is a range of sizes (taking into account regional differences in face sizes) to suit everyone from children, to large adults. It is also important to ensure that there is an adequate selection of deeper frames (for bifocal lenses).

- *Shapes:* Edging and fitting more rectangular frames is difficult with a patterned edger. If a patterned edger is used, avoid acute nasal angles or very rectangular frames. Ensure that there is an adequate selection of male and female frames.

- *Colours:* Silver and black frames will not lose their paint with age as much as other painted frames, however it is important to take into account regional preferences when selecting frames. Some regions have a definite preference to gold frames, whereas other regions will prefer brown / black frames.

- *Material:* Plastic vs metal. Metal frames are good for hard to fit faces, however some people will have allergies to the nickel contained in inexpensive metal frames. Plastic frames with fixed bridges are thicker and heavier, however are good for people that have allergies. For this reason, it is useful to have a selection of both plastic and metal frames, however, in general, metal frames are much more popular than plastic frames.

- *Number of frames to stock:* The total number of frames to stock will be determined by the outputs in the project plan. How many months of stock that is held will be dependent on budget and how difficult it is to obtain frames. For example, if frames are sourced locally, only minimal stock will need to be held in the centre. Bear in mind though, that most suppliers will offer a volume discount, so it can be more economical to spend more money upfront, and buy a larger supply. If frames are being sourced externally, then it will be necessary to hold more stock in the centre (e.g. 3 or 6 months).

- *Prices of frames to stock:* You may choose to stock frames in different price categories, where the more expensive frames are of increased style and quality, and may subsidise the cheaper frames or less fortunate patients.

Once you have considered these factors, there are a number of methods you can use to further decide which types of frames to stock in the vision centre, especially after operations have begun:

- Know the demographics of the population that the vision centre serves
- Ask patients
- Ask vision centre staff
- Look at previous sales history
- Use suppliers as a source of information

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5. Deciding on a stock range of lenses.

If your vision centre has an optical workshop, you must keep an appropriate stock of uncut lenses in stock. It is impossible to keep all lenses of all powers in stock in the workshop. This means you need to have the right mix of lens type and quantity to suit your usual patient demographic.

Your first step in choosing this range is to assess your past usage of lenses. Find out which lenses have been most popular and base your stock range on this.

In choosing the lens range, you need to make a decision in three areas: lens type, powers and materials. We'll go through each of these areas now.

Lens Type

` There are three categories of lenses to consider keeping in stock:

- **Single Vision**
  Single vision lenses contain just one power, so can be used either for distance or reading. Children can use them for both. They are the most inexpensive lens.
- **Bifocal**
  Bifocal lenses are lenses with distance in the top, and reading in the bottom of the lens. They allow a presbyope to see both in the distance, and up close. They are generally cheaper and easier to fit than progressive lenses.
- **Progressive**
  Progressive lenses are lenses with distance in the top, that then graduate in power slowly g in the bottom. They are generally more expensive than bifocal or single vision lenses and require precision fitting in order to provide good vision.

The stock range that you choose must depend on your usage. However, in general, most optical workshops will keep at least some single vision lenses in stock.

A decision needs to be made if bifocal and/or progressive lenses are to be offered in the Vision Centre. These are significantly more expensive than single vision lenses, however for a presbyope requiring distance correction as well, the only other option is two pairs of spectacles, which is expensive and inconvenient.

Your usage of bifocal and progressive lenses will determine whether these are worth keeping in stock. If your usage is low then it is best to order these from the supplier as needed. It must be remembered though, if a laboratory offshore is being used, to give patients realistic time frames about how long their spectacles will take to be delivered.

Lens powers

After choosing the types of lenses to keep in stock, you must choose the lens powers within these classes of lenses to keep. For example, if you have chosen to keep only single vision lenses in stock, which powers of single vision lenses will you hold? To make this decision you need to carefully examine the prescriptions used in the past. Your stock range should include as many of these as possible. You won't be able to cover all of them with your stock range, but if you can cover the majority then this is a good result.

You can restrict the ranges of lenses by power in three different areas:

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- Sphere
- Cylinder (single vision lenses only)
- Add Power (bifocals and progressive lenses only)

Lens materials and coatings
You can consider providing lenses of different materials and coatings. These lenses could be sold at a higher margin to increase cost recovery. These include:

- higher index (thinner) lenses,
- anti-reflective lenses,
- photo-chromatic lenses.

However, in general, it is best to order these specialised lens types as necessary to keep the stock range manageable. It may be more beneficial to increase your range of powers in standard lens materials than to keep lenses of different materials and coatings in stock. However, this decision depends on your past usage.

(For an example Vision Centre lens seed stock order, see C4_2_Vision Centre lens seed stock example)

6. Readymades.

Readymade spectacles come with frames and lenses together. They have the same prescription in each eye. They can be a useful way of reducing the workload of an optical workshop, and providing a cheap, on-the-spot refractive error correction for a large proportion of patients. Yet a decision needs to be made on the power of readymades that are stocked in the centre. Higher powered readymades are generally unsuitable for patients due to the difference between the centre of the lens (optical centres) and the patient's eyes (PD).

7. Sunglasses.

A decision should be made whether to stock prescription and/or non-prescription sunglasses. If the decision to produce prescription sunglasses is made, it will be necessary to purchase a tint bath and lens holder. It will also be necessary to have an adequate supply of tint and UV. A tint bath requires a constant supply of electricity (and they tend to draw a lot of power) to hold the tint at a specified temperature, so in regions where the electricity supply is unreliable, it can be difficult to tint.

If non-prescription sunglasses are stocked, it is worthwhile considering lockable frame displays for them, as these are the most likely item to be stolen.

Low cost sunglasses provide a valuable service to the population in areas where UV related ocular damage (eg pterygium) is common. Non-prescription sunglasses can also be used to cross-subsidise the cost of running the centre, as higher cost, designer sunglasses can provide a higher cost, high profit product.

8. Cases.

Spectacle cases will lengthen the life of a pair of spectacles by reducing the chances for the frames to be damaged, or the lenses scratched. Yet providing a case free-of-charge will add cost to the price of spectacles. Cases are also heavy and bulky, and thus expensive to ship.

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