

Basic wheelchair maintenance training for manual and power wheelchair users

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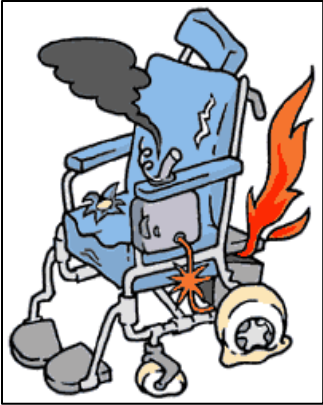
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You will be able to recognize the importance of maintenance and recommended inspection and action items.



[www.usersfirst.org]

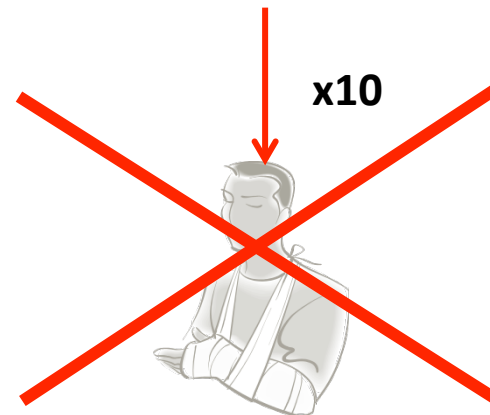
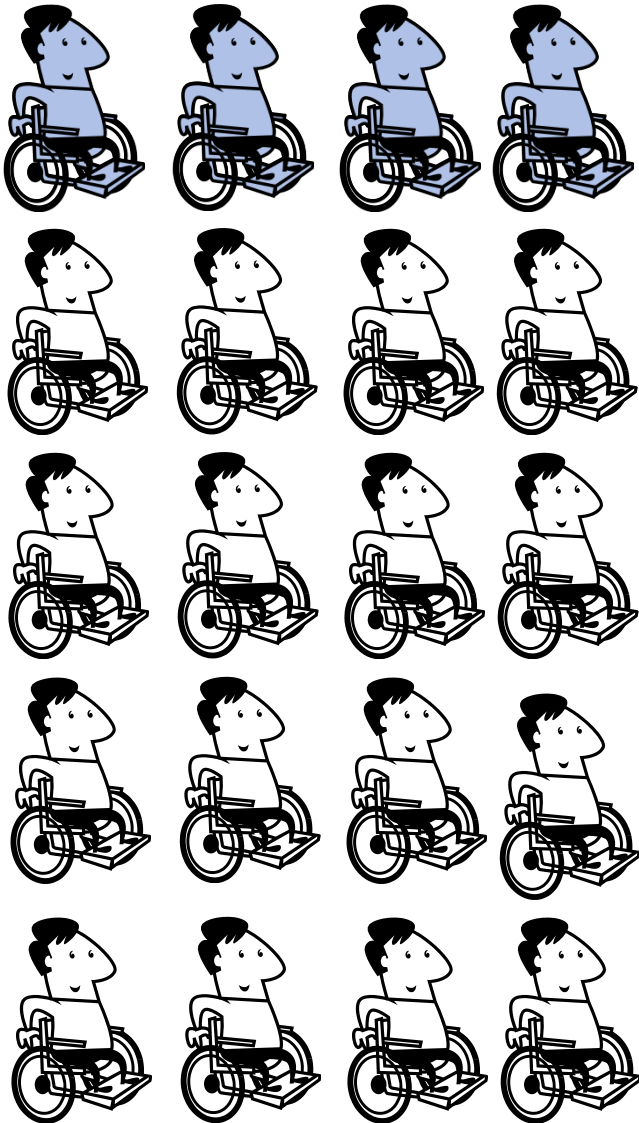


A wheelchair is the most enabling technology but may negatively impact a person's life if it does not enable him/her to participate fully.



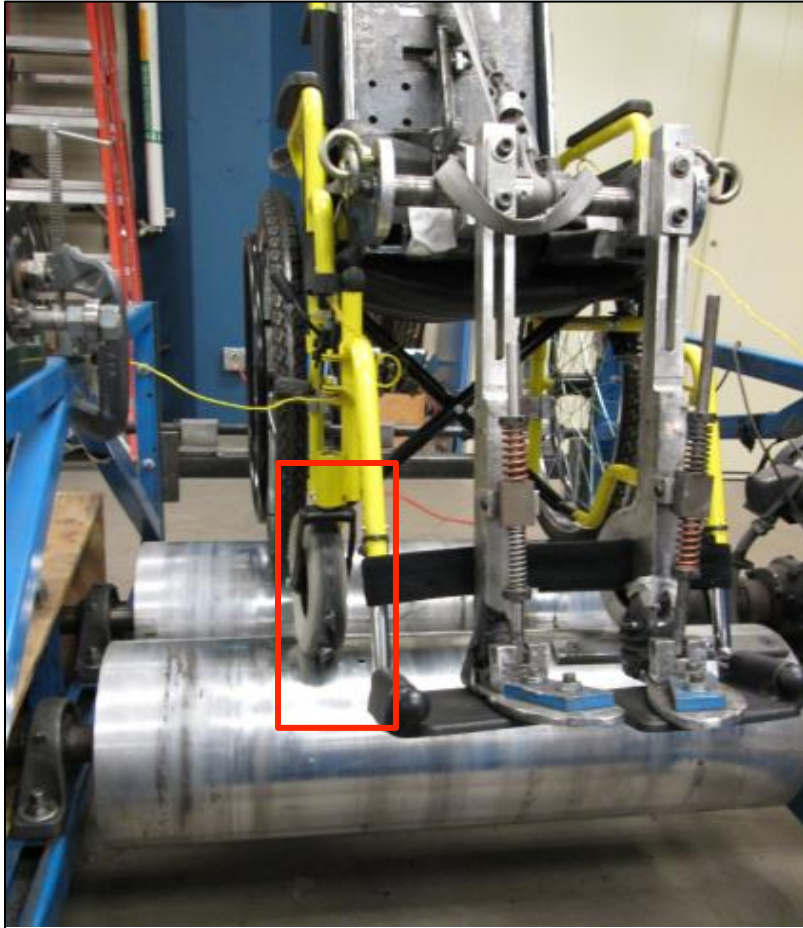
3.6 million
273,000 SCI

Injuries occur more frequently when wheelchairs are not maintained or repaired.

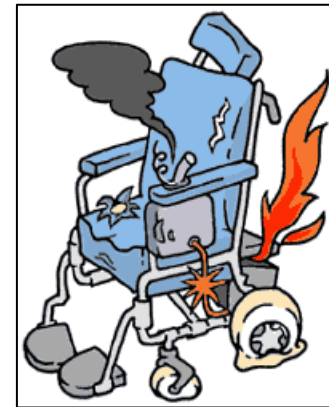
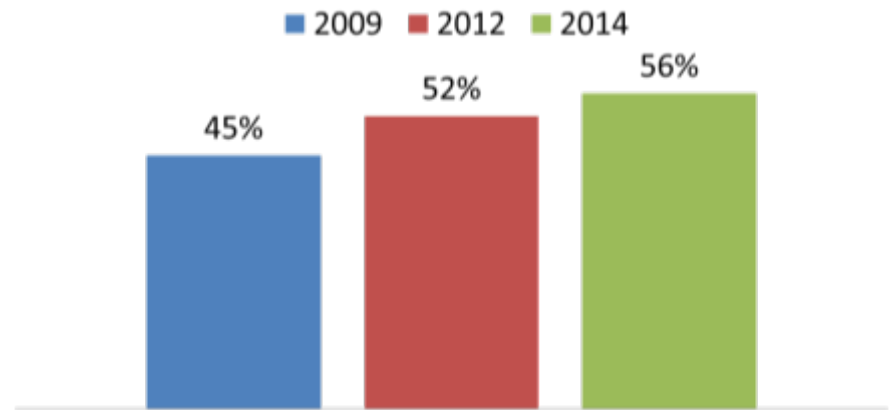


Wheelchair durability found lower than required in laboratory settings and repairs needed increased in the community.

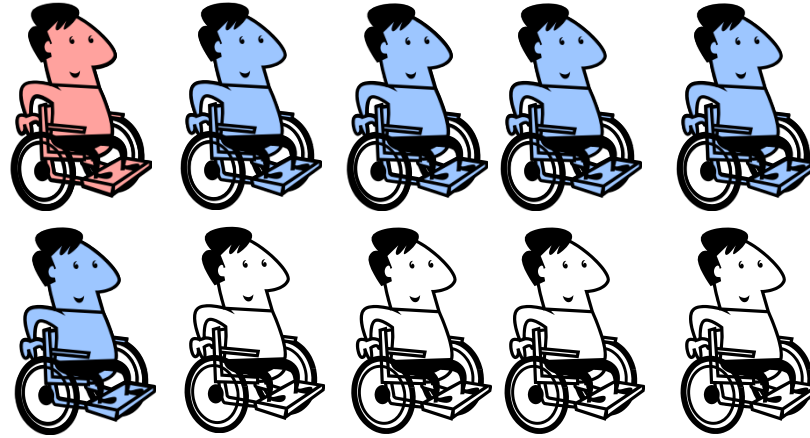
ANSI/RESNA wheelchairs double-drum test



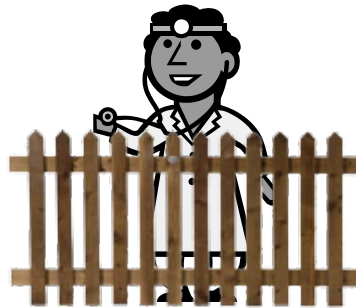
Percentage of wheelchair users reporting needing repairs in the past 6 months



Wheelchairs needing repairs has been reported as a cause of adverse consequences for wheelchair users.



Missing work



Missing medical appointments



Being stranded



Being injured

Wheelchair check-ups are likely to reduce adverse events related to wheelchair breakdowns.

Cleaning caster axles



Patching a flat tire



Tightening loose bolts



Listening to motor noises

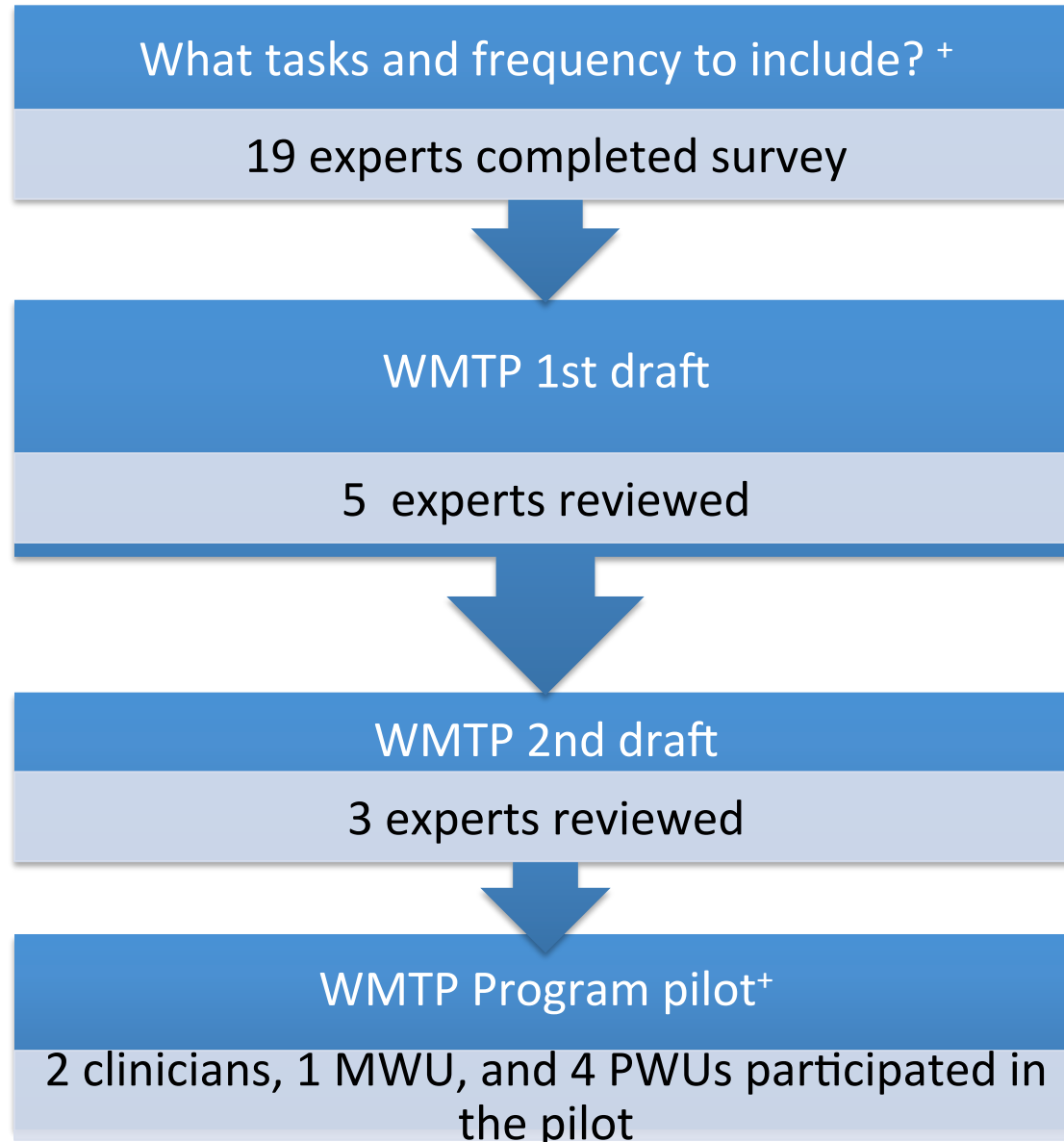


All wheelchairs require periodic maintenance to operate properly

Scarce of wheelchair maintenance is likely related to the lack of wheelchair training provided to individuals with SCI.



The Wheelchair Maintenance Training Program (WMTP) was based on existing materials and experts review through an iterative process.



Training programs train clinicians who then train wheelchair users in a group setting.



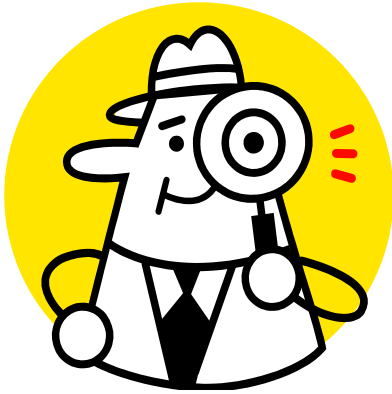
6-hour training course

Maintenance



2 two-hour group training sessions

Inspection and action items are included in the maintenance schedule.



Inspection



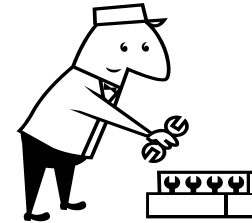
No problems



Found a problem



Continue using the
wheelchair



Action



Action

The WMTP for clinicians includes rationale, hands-on maintenance practice, and overview of materials to train users.

Time	Activity
10:00 AM	Introduction
10:05 AM	Objectives and relevance
10:15 AM	Manual wheelchair maintenance video
10:30 AM	Manual wheelchair maintenance hands-on
12:30 PM	Lunch
1:15 PM	Power wheelchair maintenance video
1:30 PM	Power wheelchair maintenance hands-on
2:40 PM	Training materials overview
3:40 PM	Discussion and summary
4:00 PM	Adjournment

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The first session is mainly focused on maintenance tasks demonstrations.

Day	Duration (minutes)	Time	Activity
1	5		Introduction
	15		Objectives and relevance
	5		How to take care of a wheelchair at home DVD
	60		Caring for a wheelchair at home
	5		Summary
2	90		Hands-on wheelchair maintenance activity
	20		Summary and discussion
	5		Adjournment

Improperly inflated tires wear quickly and make a wheelchair difficult to maneuver and propel.



Tire depresses more than 5mm



Types of valves



Presta



Schrader



Inflate to recommended pressure



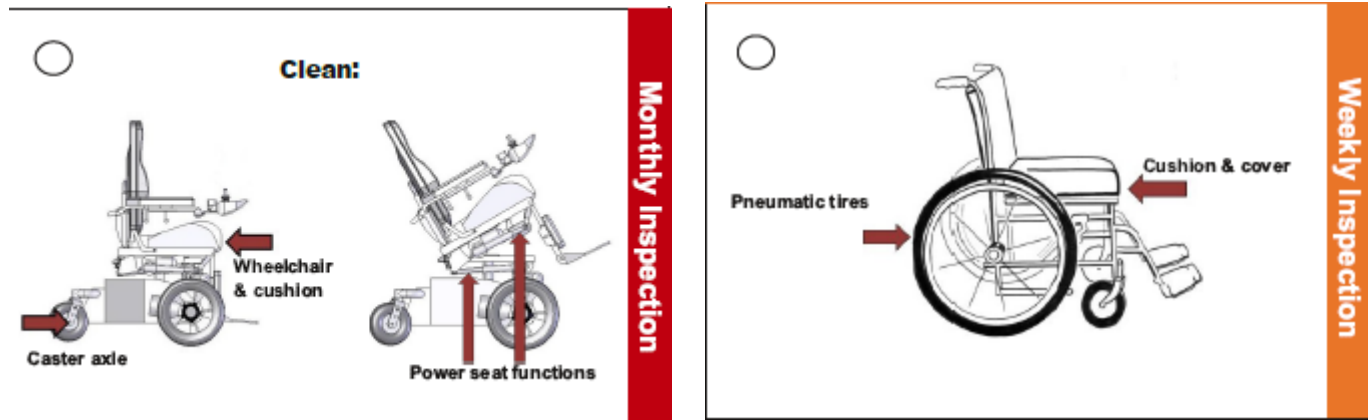
INSPECT WEEKLY

The second session is mostly hands-on practice and discussion.

Day	Duration (minutes)	Time	Activity
1	5		Introduction
	15		Objectives and relevance
	5		How to take care of a wheelchair at home DVD
	60		Caring for a wheelchair at home
	5		Summary
2	90		Hands-on wheelchair maintenance activity
	20		Summary and discussion
	5		Adjournment

Maintenance cards, a toolkit, and reminders are take-home resources.

Maintenance cards



Toolkit

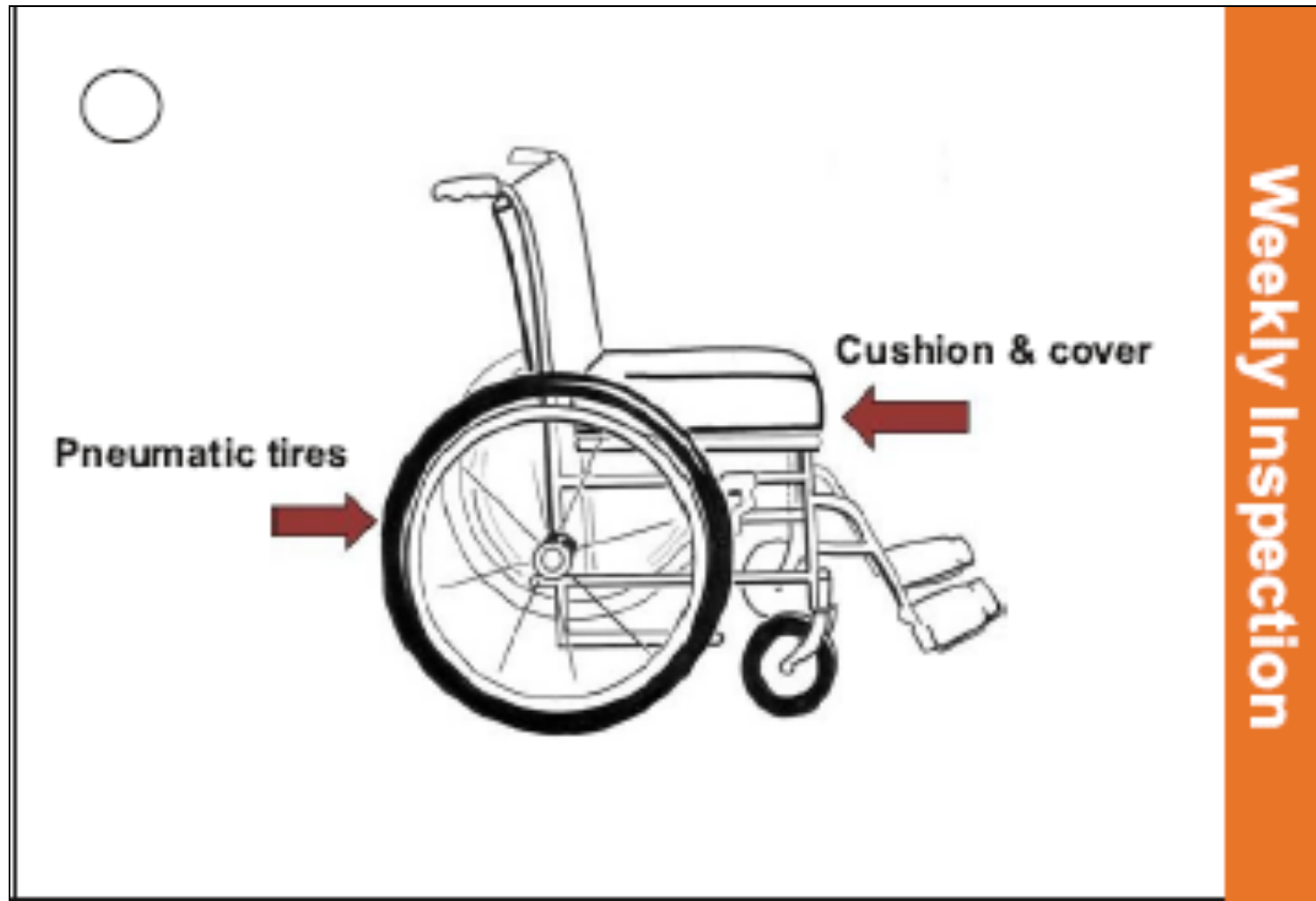


Maintenance
reminders

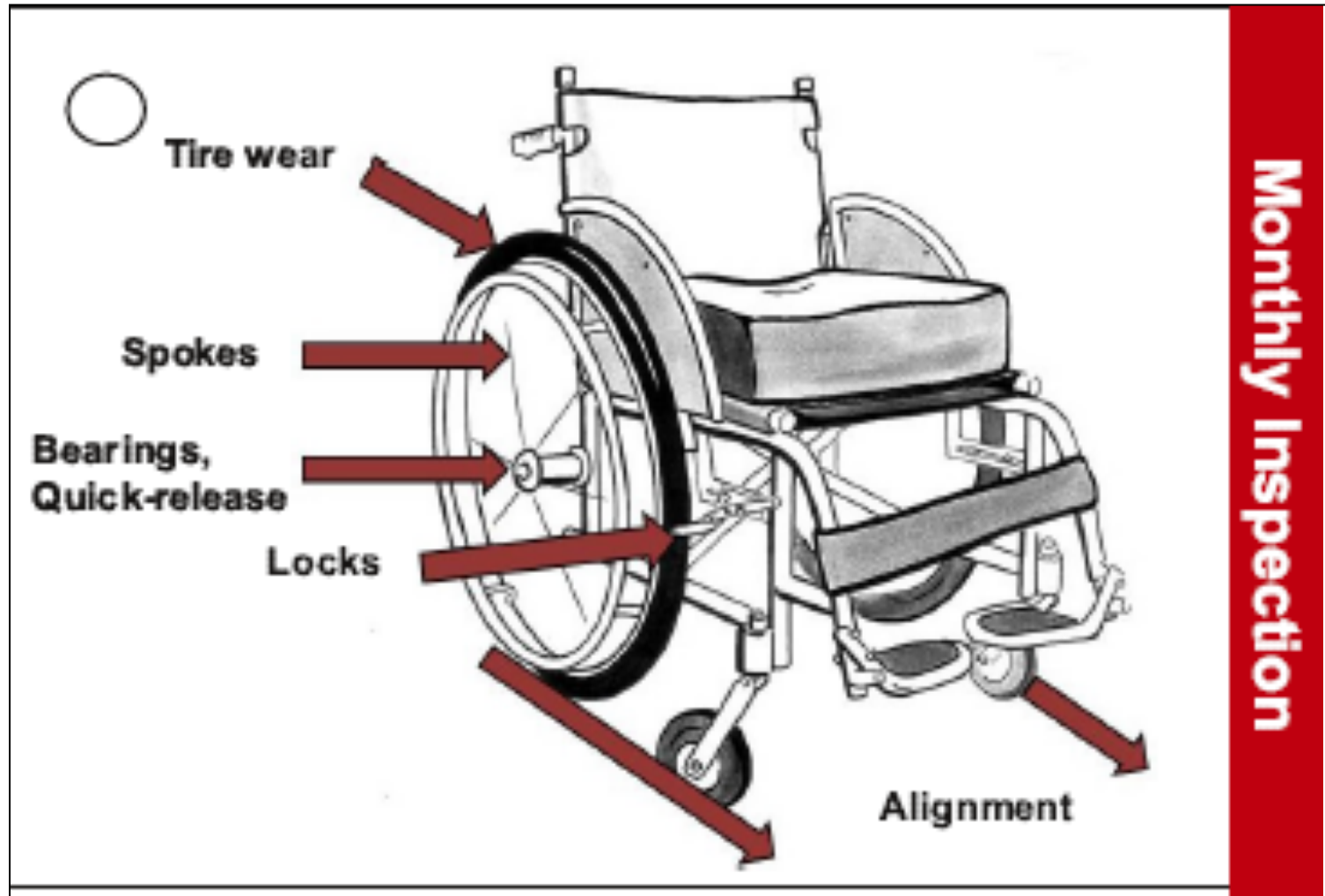




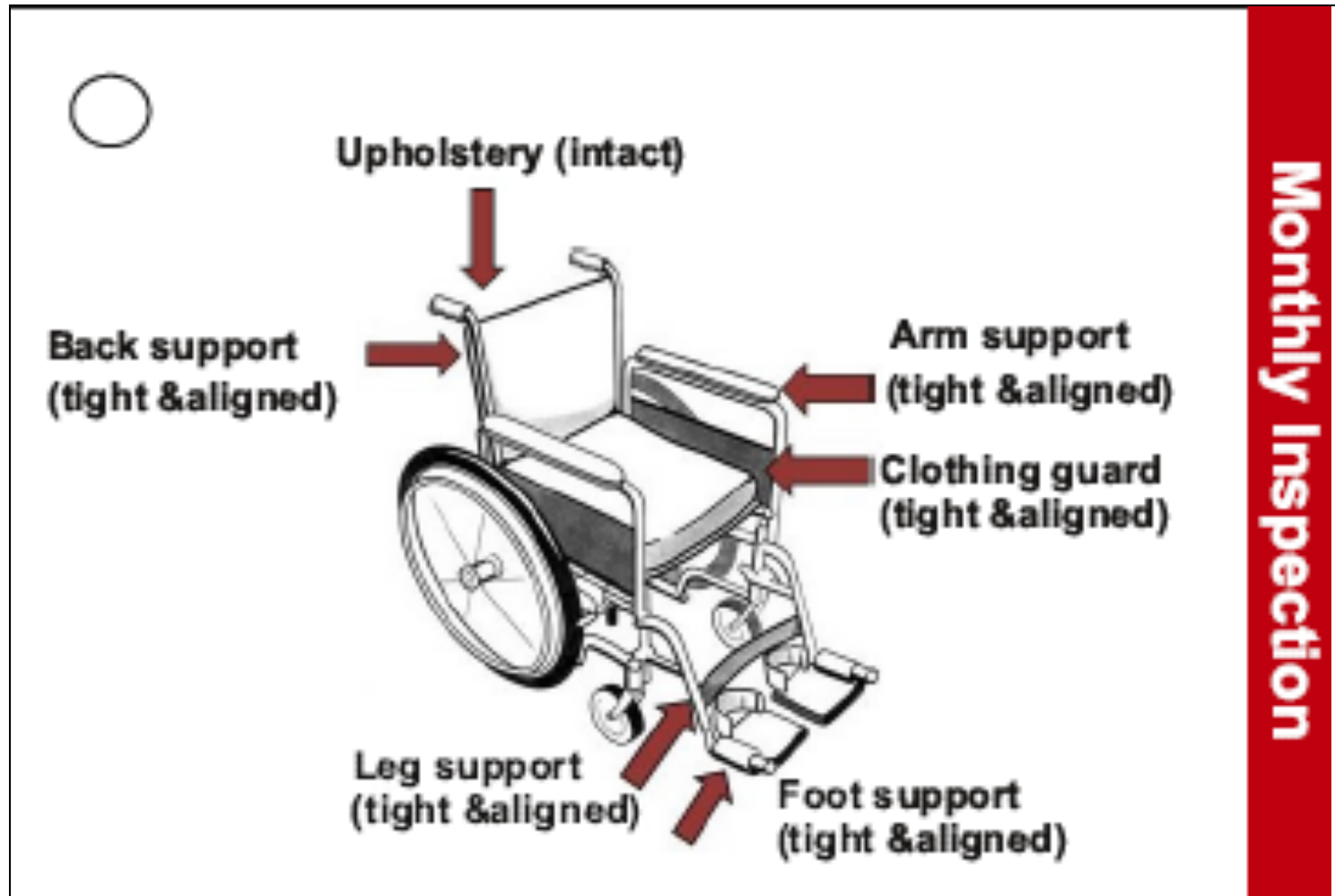
Weekly inspect the condition of the cushion and the pressure in the pneumatic tires.



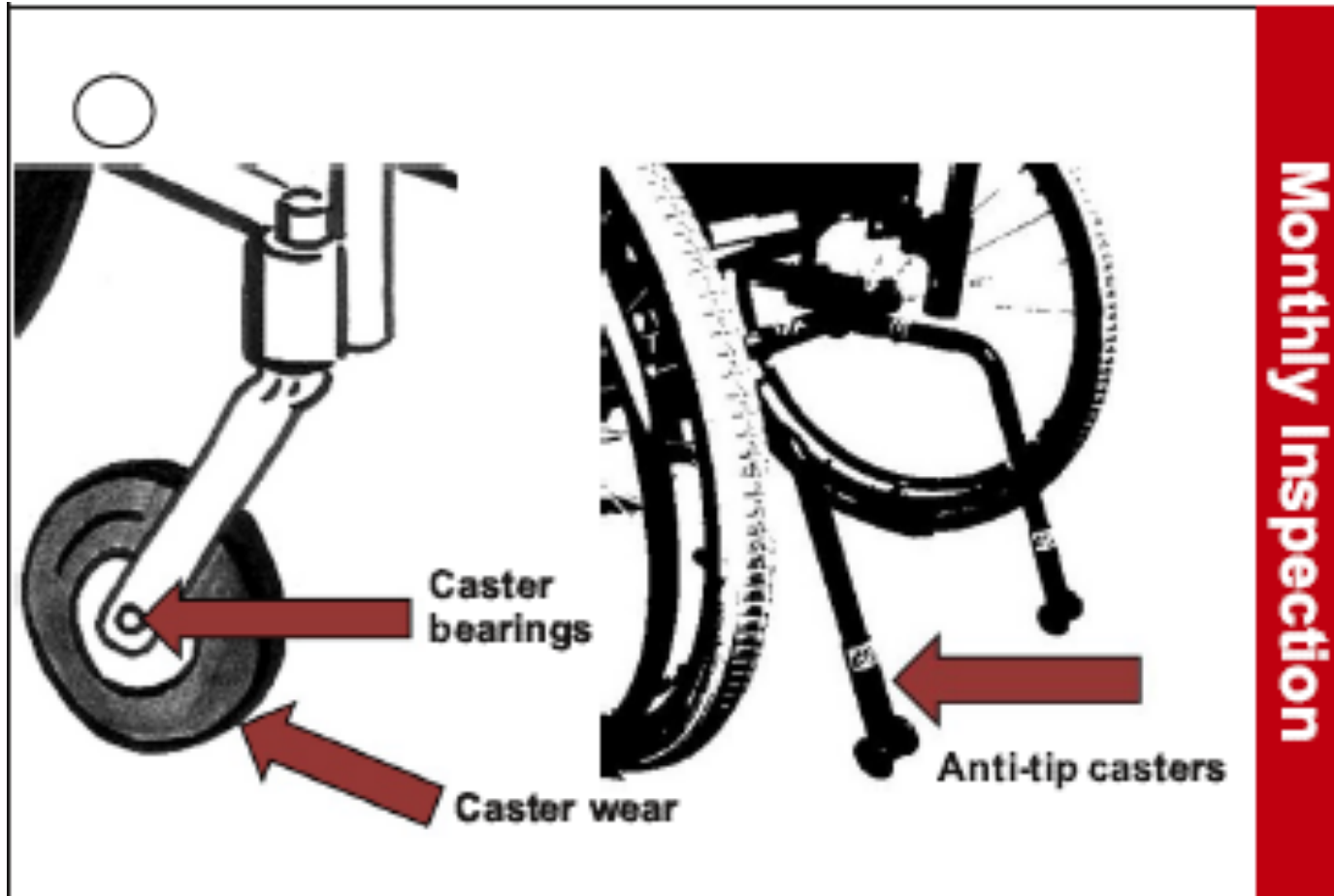
Monthly inspect the wheelchair alignment and all the wheel components.



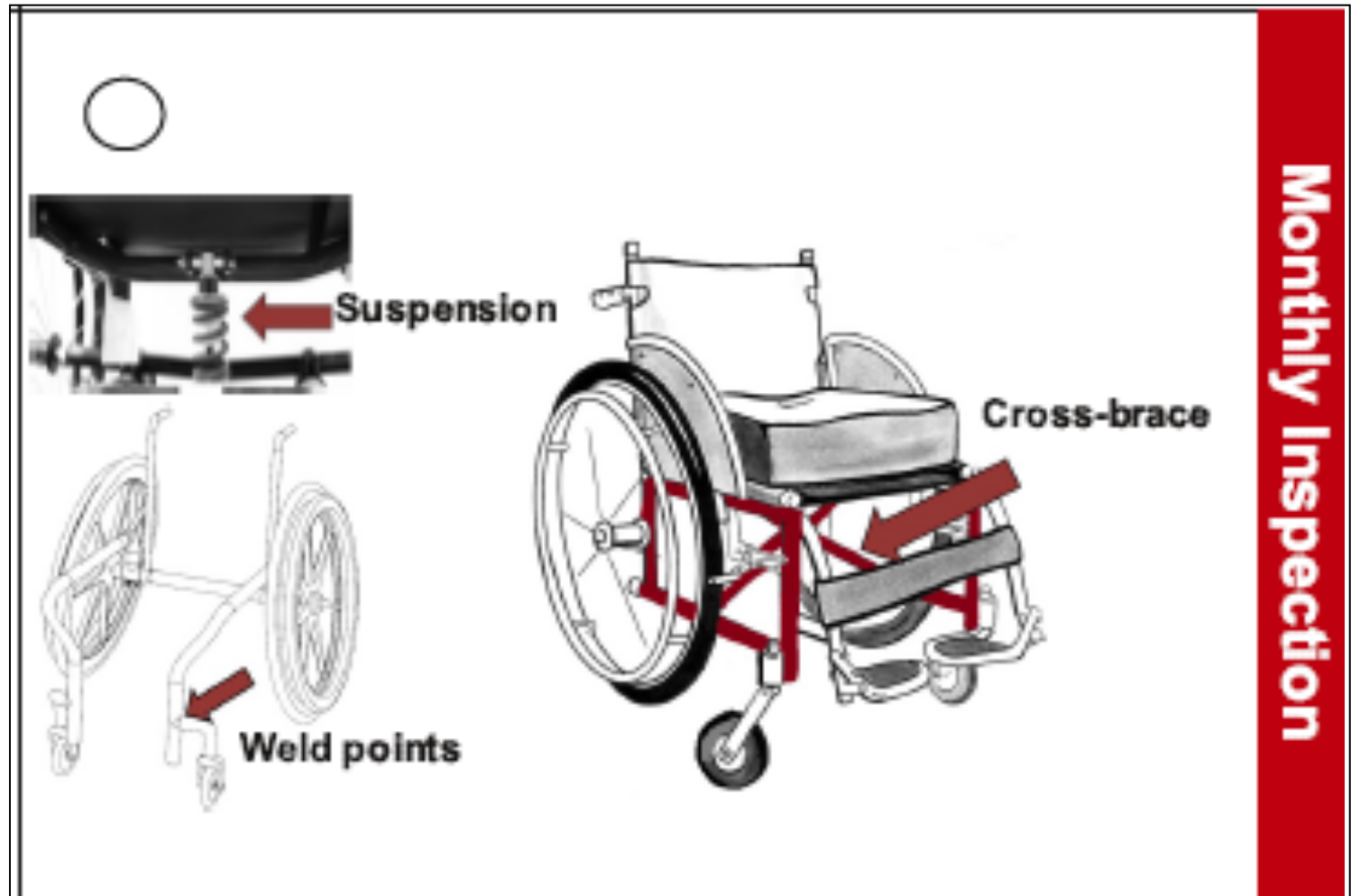
Monthly inspect all the wheelchair supports.



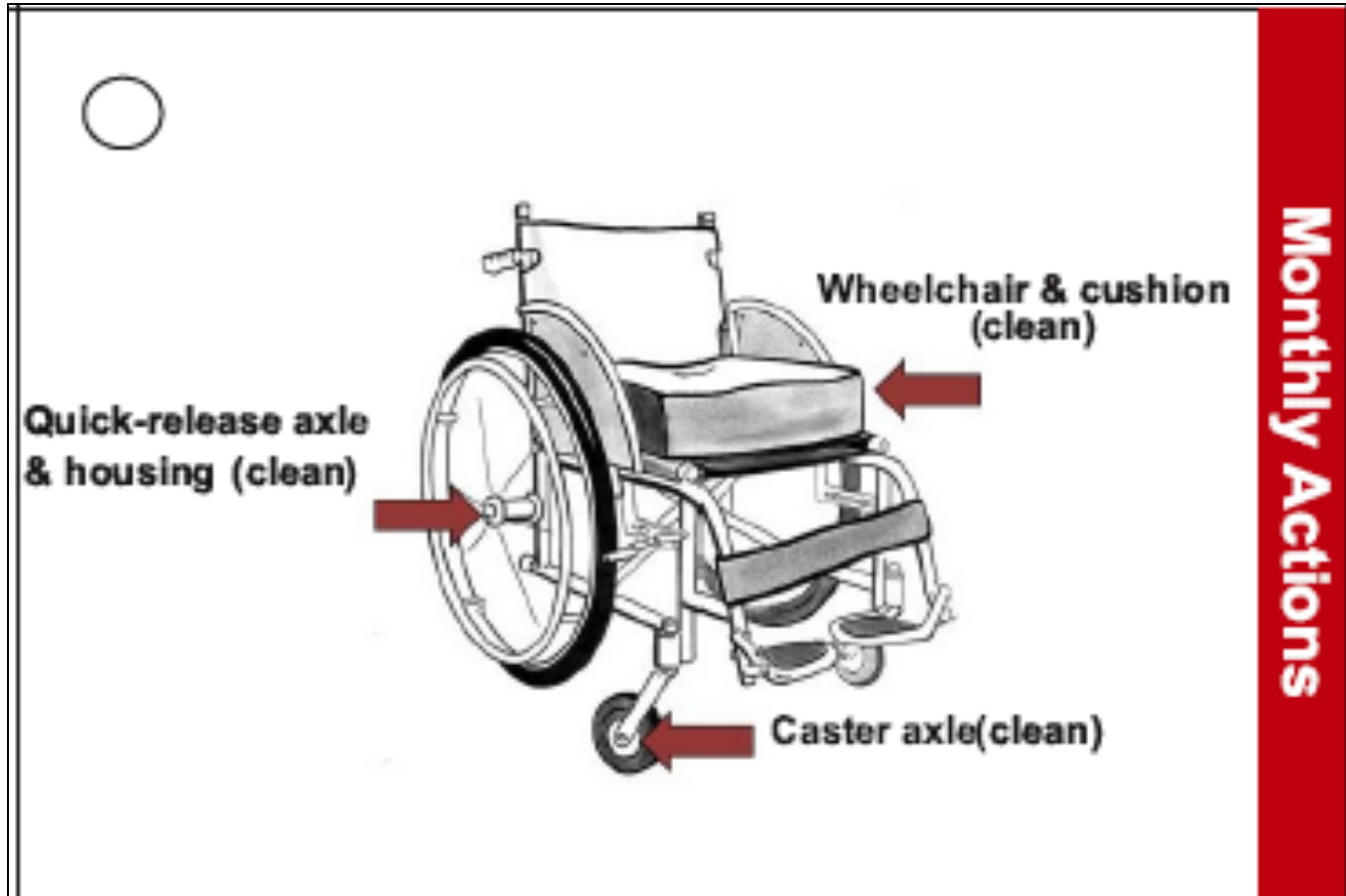
Monthly inspect the condition of the front and anti-tip casters.



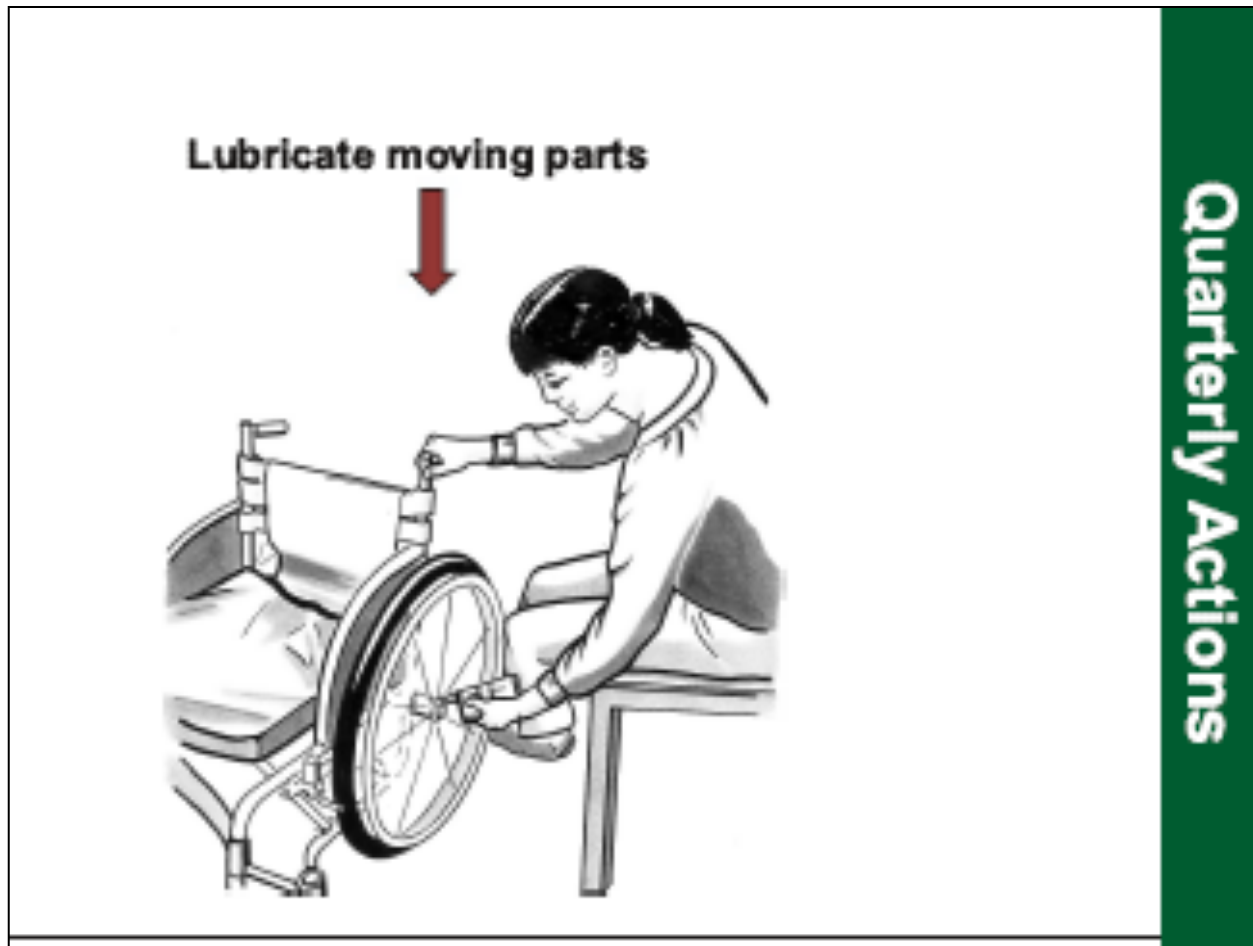
Inspect monthly all the frame components.



Once a month clean the wheelchair.



Four times a year lubricate moving parts like the wheel locks and the folding back support mechanism.

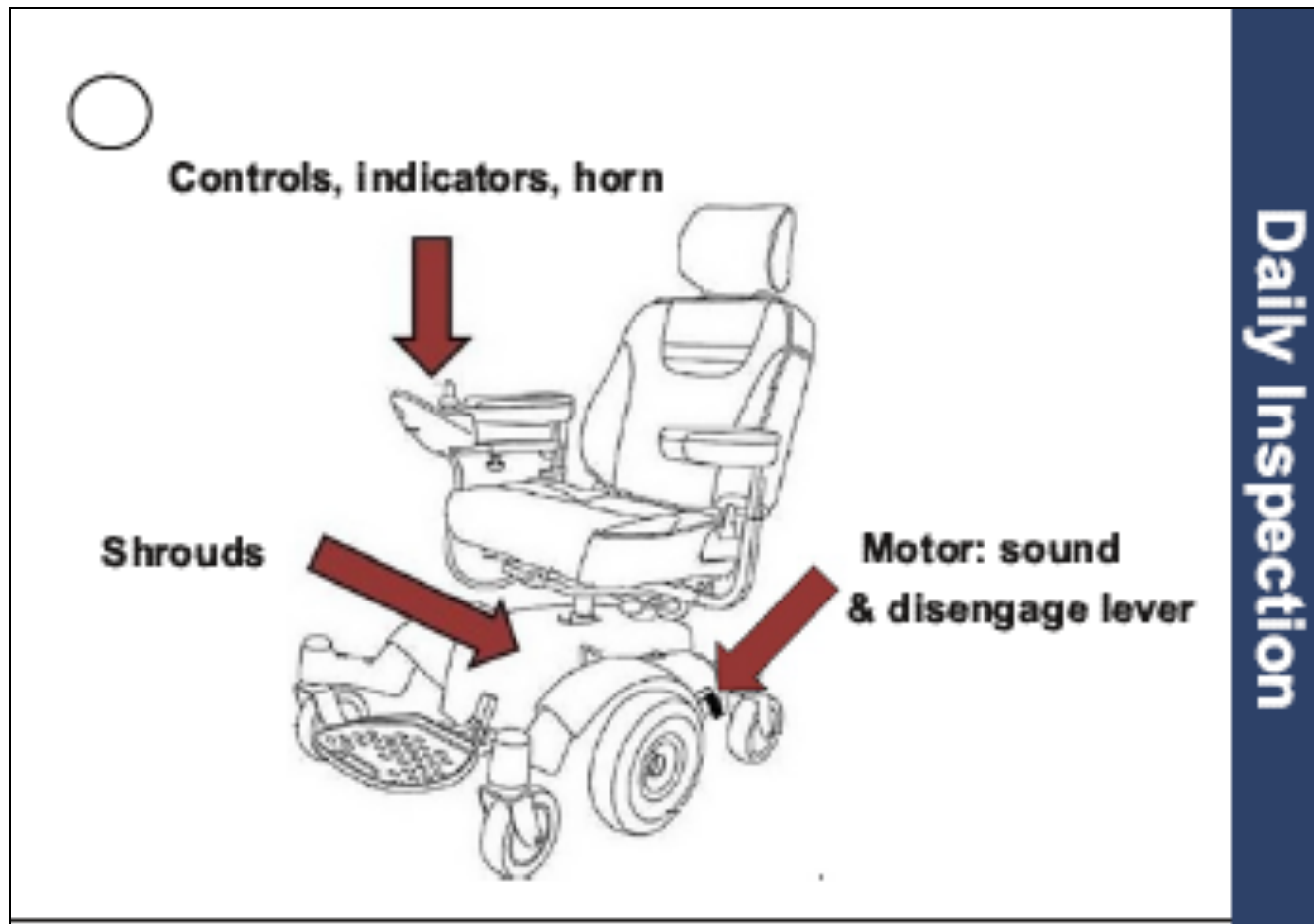


Have the wheelchair professionally serviced at least once a year.

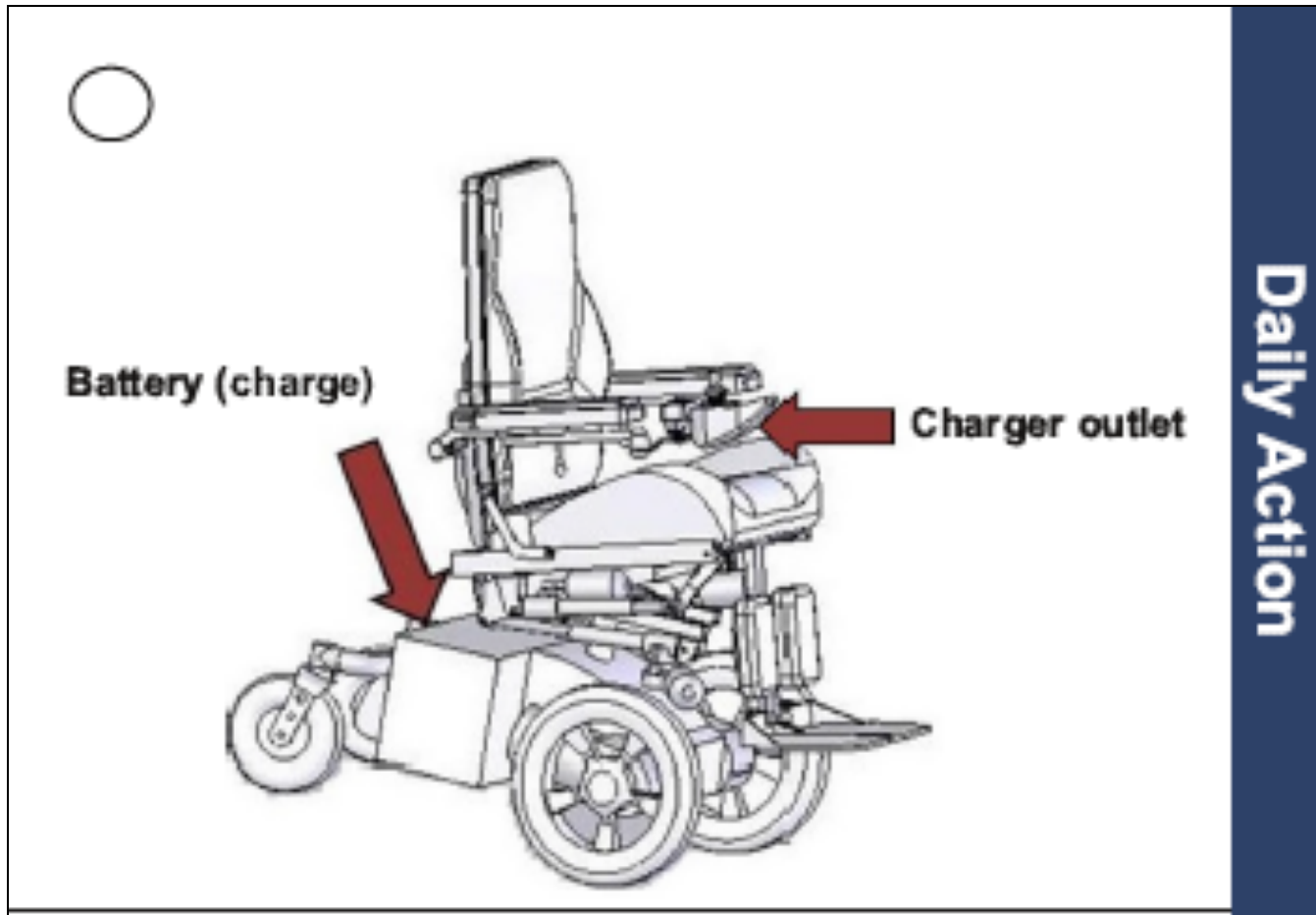




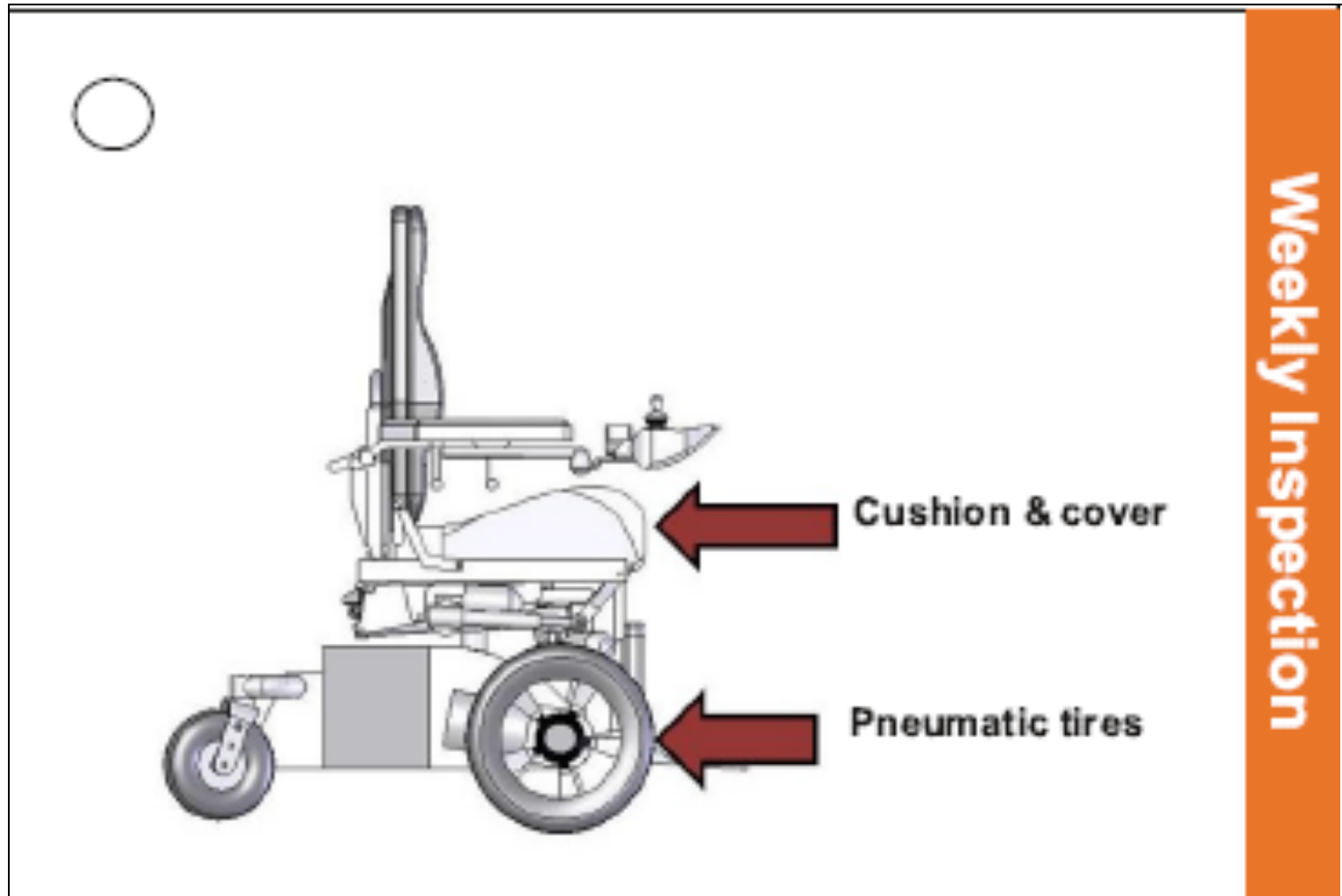
Daily pay attention that the wheelchair works reliably.



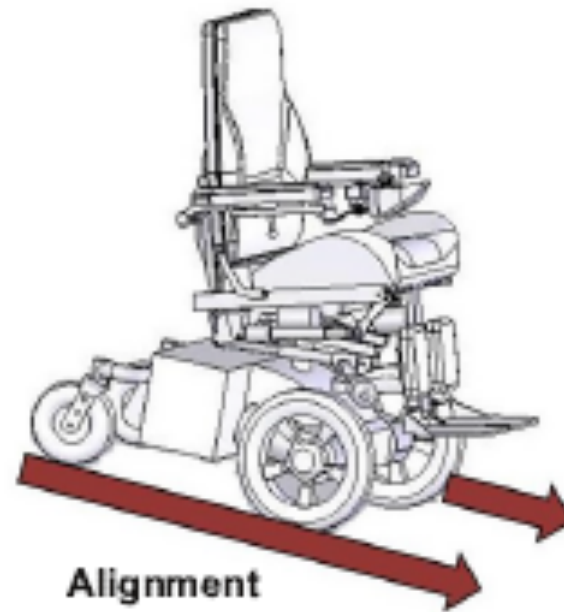
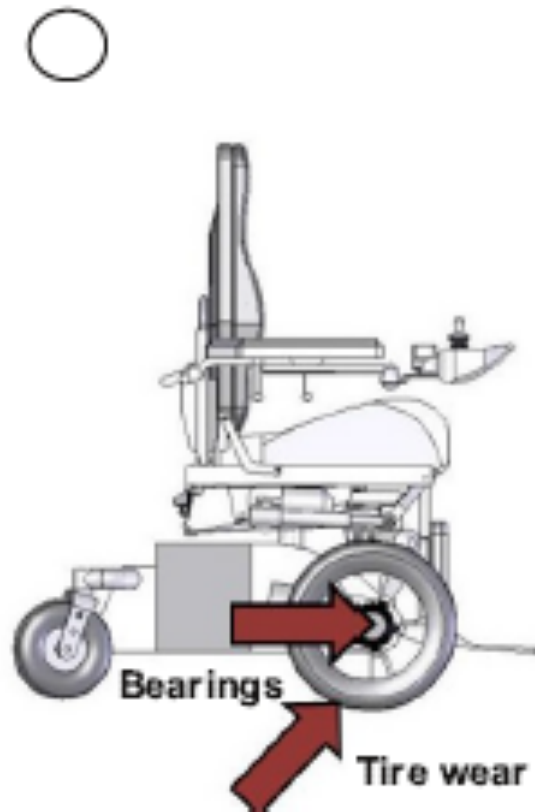
Charge the wheelchair daily if you use it daily.



Weekly inspect the condition of the cushion and the pressure in the pneumatic tires.

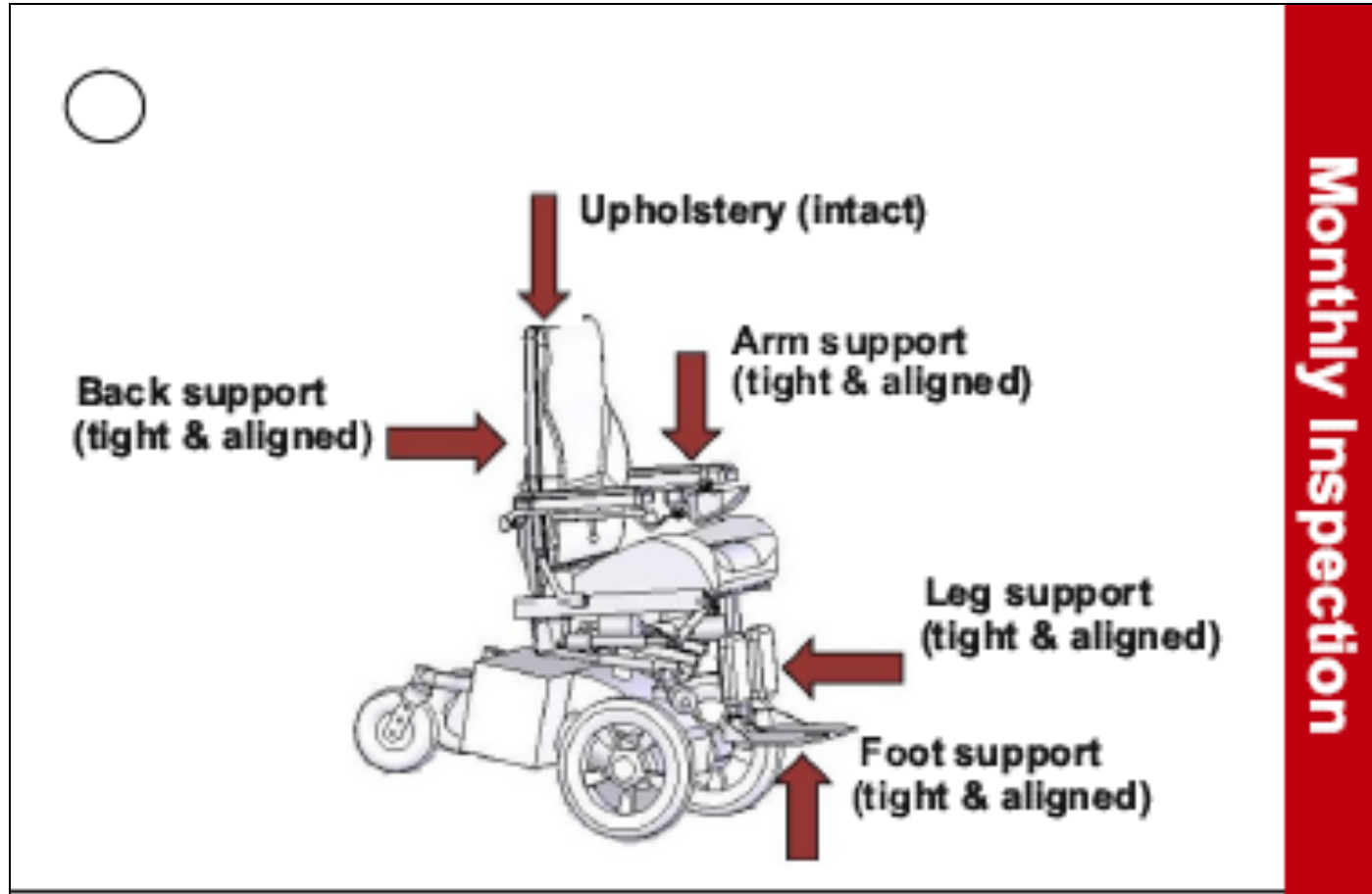


Monthly pay attention to the wheelchair alignment, wheel bearings, and tire condition.

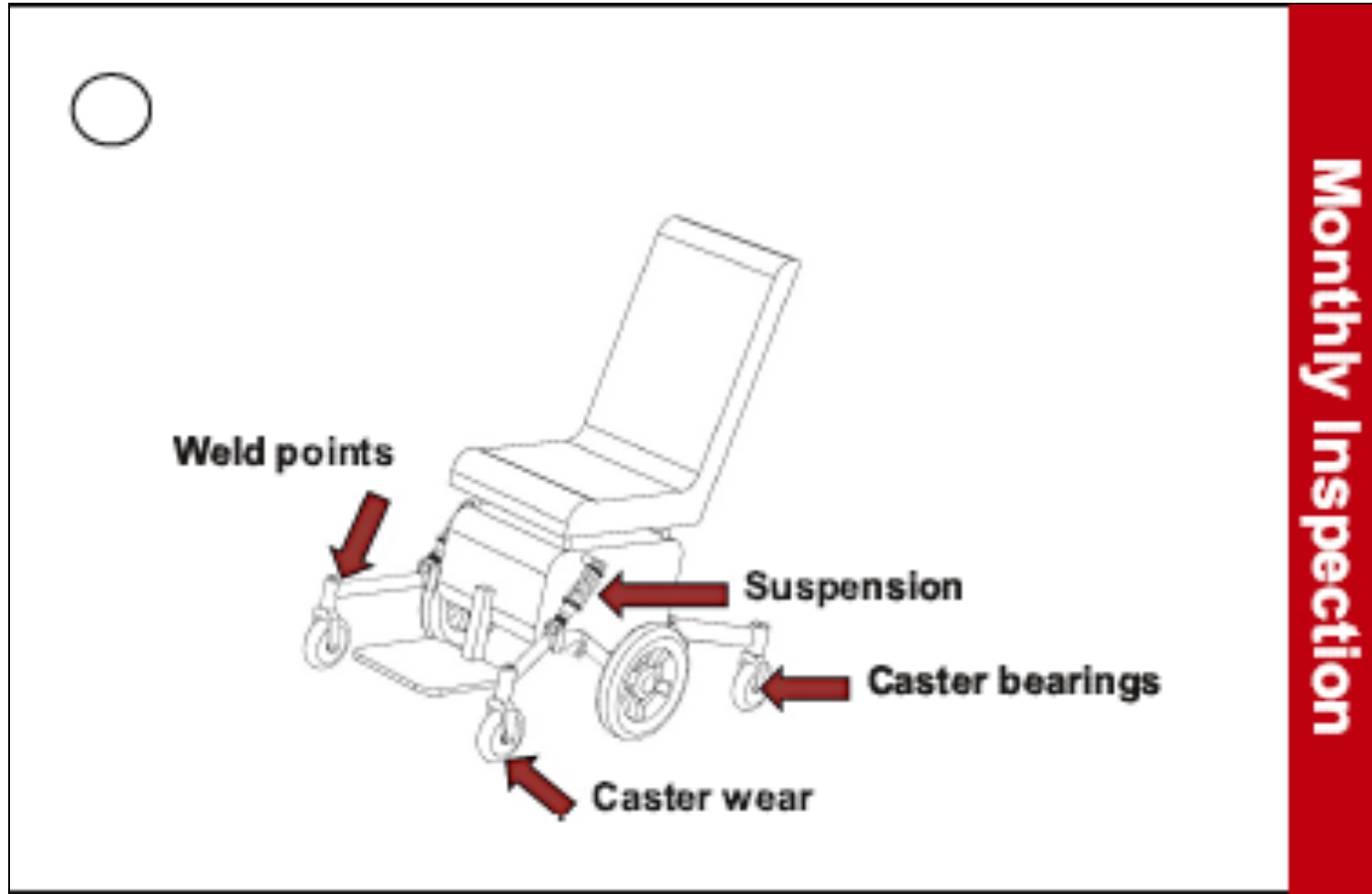


Monthly Inspection

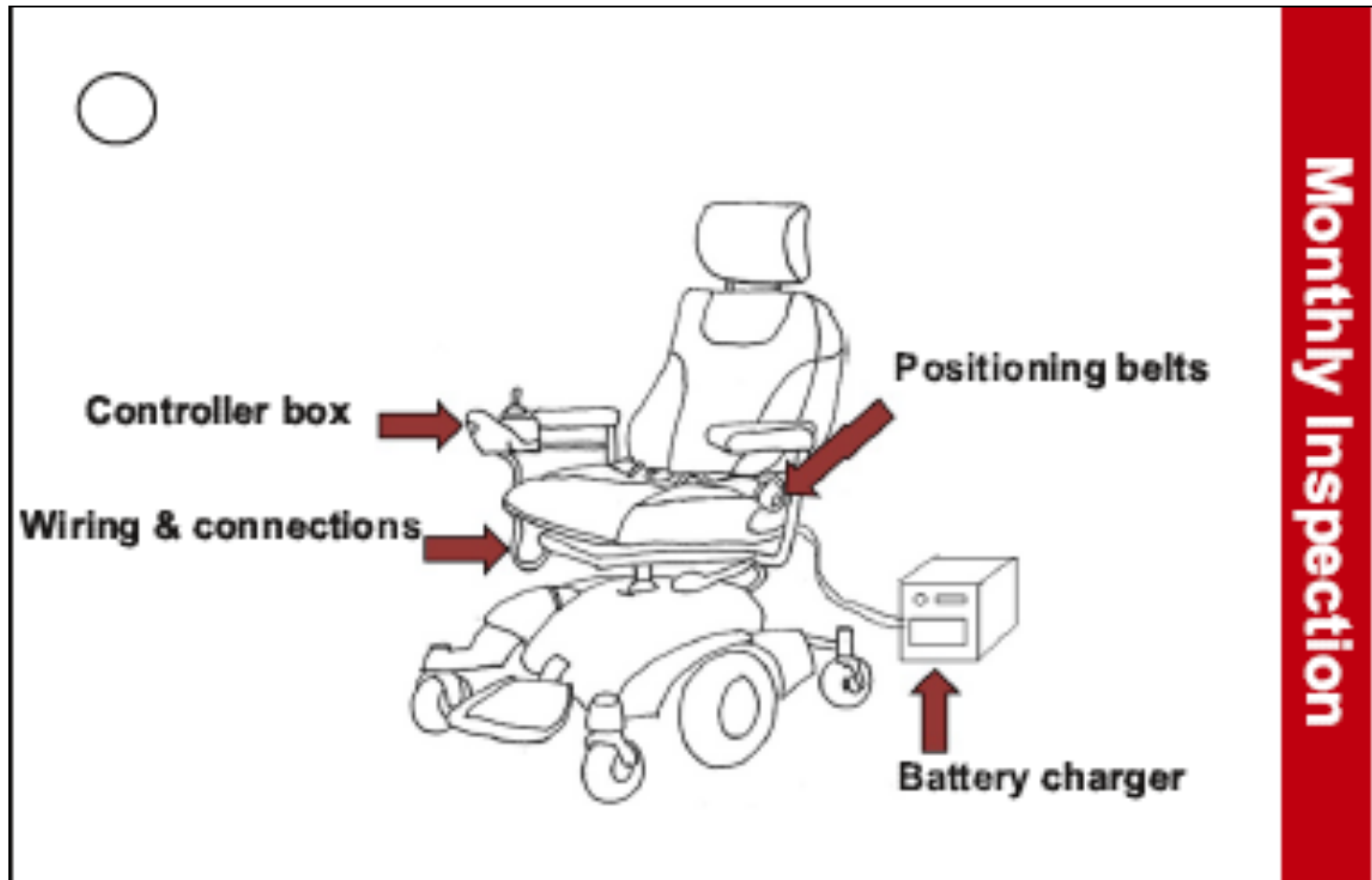
Monthly inspect all the wheelchair supports.



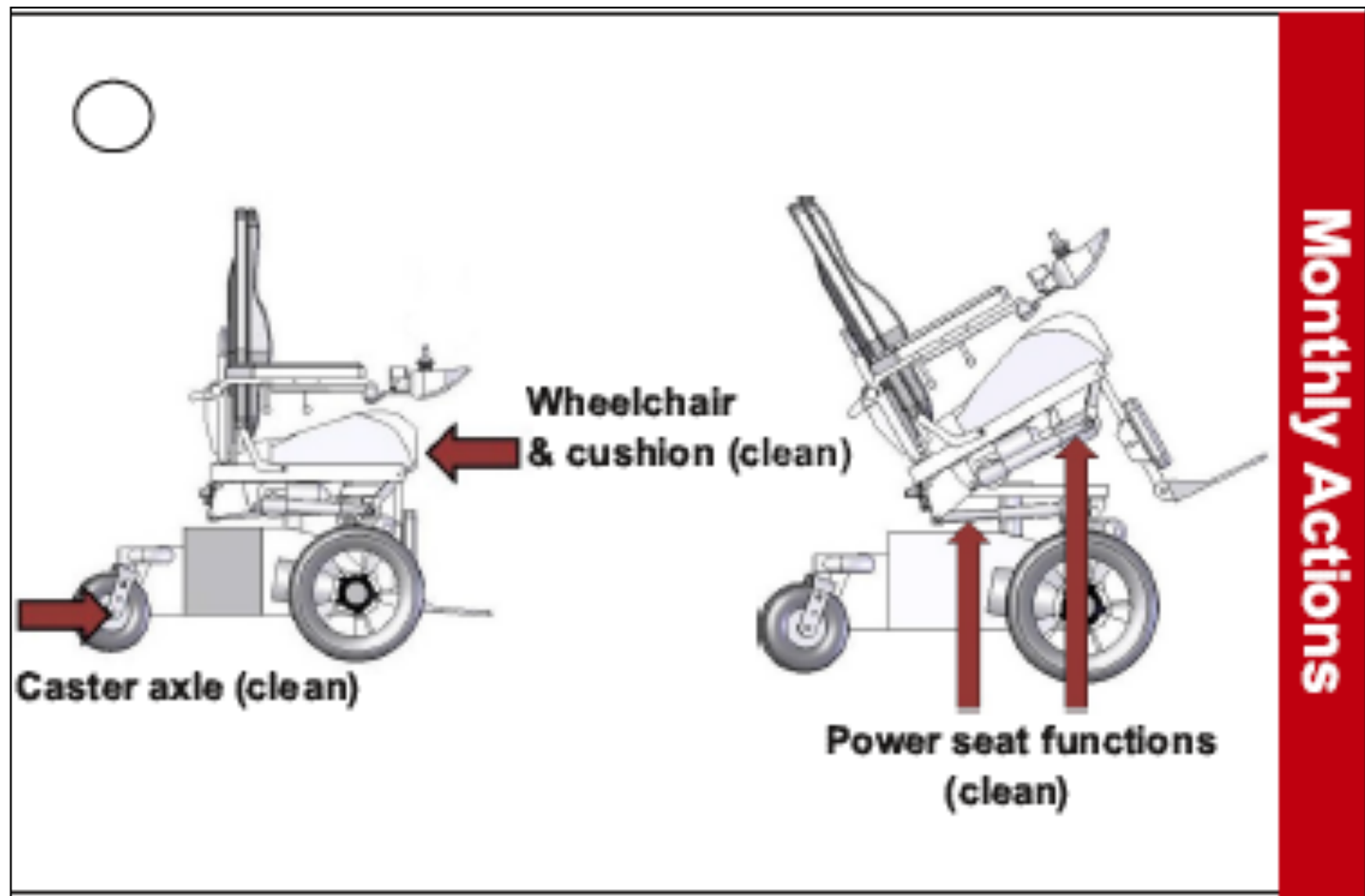
Have the wheelchair professionally serviced at least once a year.



Have the wheelchair professionally serviced at least once a year.



Clean the wheelchair frame, cushion and power seat function mechanisms monthly.



Have the wheelchair professionally serviced at least once a year.



We have trained clinicians at 4 sites, are currently recruiting wheelchair users, and planning on more dissemination.



6-hour training course

Maintenance



2 two-hour group training sessions

**15 clinicians WMTP
29 pwc users WMTP**

Questions?

This project has been supported by many people and organizations!



- Volunteers for training materials
- Study participants



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